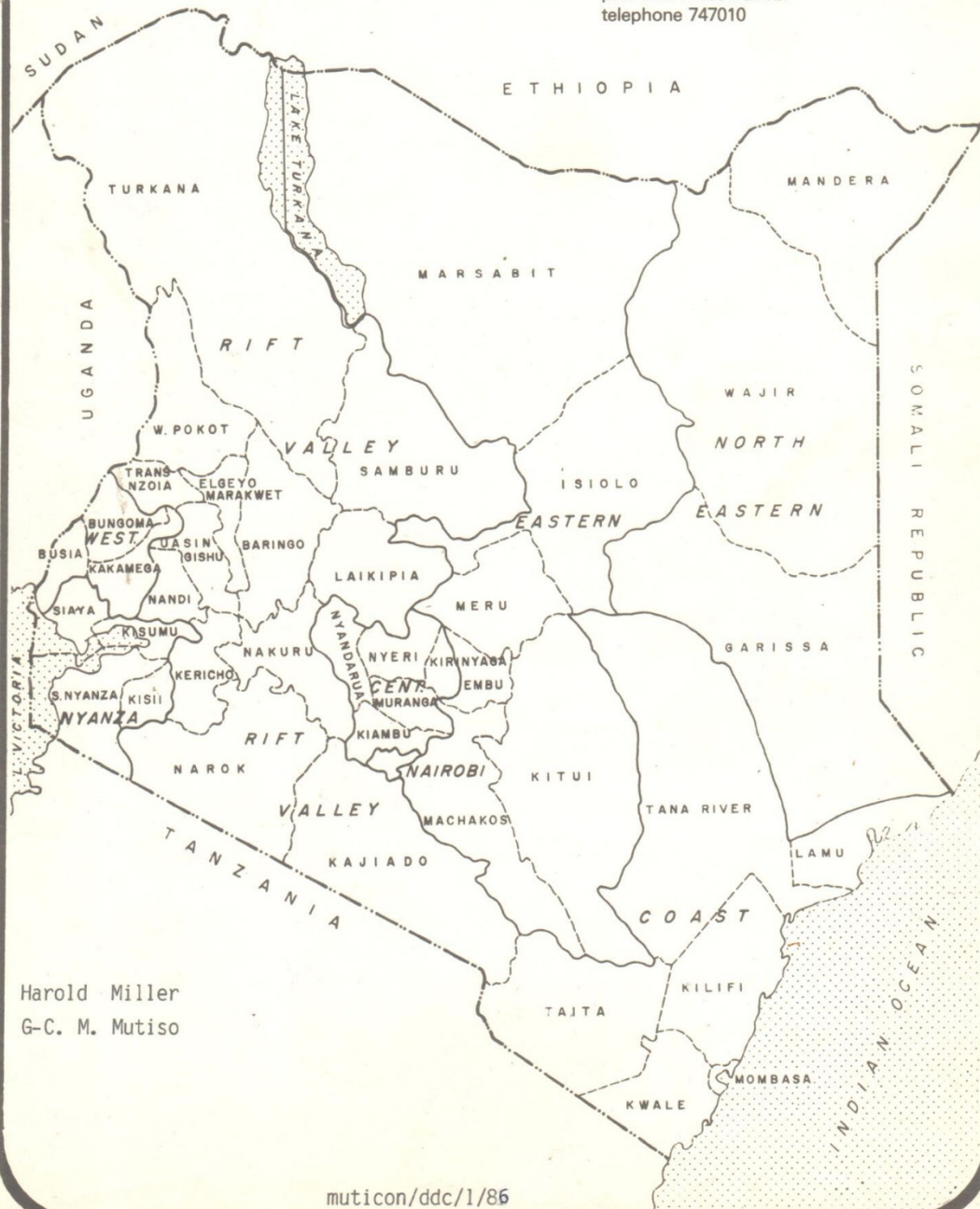


NGOS IN MACHAKOS



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Glossary

1. ABC - African Brotherhoold Church
2. ADC - African District Council
3. AIC - African Inland Church
4. ALDEN - African Land Development Board
5. AMREF - African Medical Research Foundation
6. CCEA - Christian Churches Educational Association
7. CCF - Christian Children's Fund Incorporated
8. CEBEMO - Netherlands Catholic NGO.
9. DC - District Commissioner
10. DDO - District Development Officer
11. DEC - District Executive Committee
12. GOK - Government of Kenya
13. DOM - Diocese of Machakos (Catholic)
14. ICA - Institute of Cultural Affairs
15. KCB - Kenya Commercial Bank
16. MISERIOR - German Catholic NGO
17. NCCCK - National Christian Council of Kenya
18. NGO - Non-governmental Organisation
19. RDF - Rural Development Fund
20. UNICEF - United Nations Children's Emergency Fund
21. USAID - United States Agency for International Development
22. WFP - World Food Program

1. Where Do NGOs Come From ?

It is something of a truism to say that NGOs are a phenomenon of pluralist societies. Much of the thrust of formal NGOs comes from the western world. That world is comprised of hundreds of non-governmental initiatives, ranging all the way from neighbourhood organizations to major welfare organizations. In this case we are interested primarily in those NGOs which because of certain critical circumstances, find themselves operating in the international arena.

Typically it is a major event such as a war or a famine which catapults an NGO into international action. It is important to understand that many of the major American NGOs which have since become 'house-hold words' (or acronyms) were 'born' during or immediately after the World War II. And even those which were birthed later, joined the international action in a milieu established by the post war period.

To this day almost every reference to the major American NGO community includes some comment about the Marshal Plan, that massive commitment to the rebuilding of Europe from the ashes of war. The Marshal Plan was in many ways a logistical problem - it was a matter of providing Europe with access to material required for reconstruction. It was assumed that the remaining Europeans knew what to do with the material offered ; there was a congruence of values.

In its own way, the war shook the foundations of the imperial world and among other factors led to the so-called independence of nations long under imperial tutelage. Many of the agencies which had assisted in post-war relief and reconstruction (i.e. transfer of material and capital) in the late 1950s and 1960s suddenly discovered a whole new world in which to operate -it wasn't yet called the 'third world', it was still a post-colonial world, or as some would say, a neo-colonial world.

In the switch from Europe to the post-colonial world, many of the agencies eagerly latched onto the word "development", but for the Americans particularly, there was the assumption that development involved the transfer of capital, material in much the same way that the Marshal Plan had been effected. In their attempts to effect this 'new Marshal Plan', the agencies quickly discovered something called the 'non-western' world.

Since it did not have technique, skill training became an important addition to development, thereby completing the trinity.

From the World War II through the development decades (1960 & 1970s) the NGO agencies experienced important shocks and setbacks as they came into more intense interaction with their latest discovery, the non-western world. But it must be affirmed, to their credit, that many of them genuinely tried to learn about the world which they were trying to serve. By the early 1980s it was fair to say that certain sensitivities and inter - or cross - cultural skills had been acquired. Thus there was in some sense (however narrow) progress made toward/differentiated, sensitive development implementation.

Unfortunately much of that momentum and direction was lost in successive wars and, in particular, droughts. The mid-1970s' Sahelian drought and the more recent Ethio-Sudanese drought have become overpowering media events. Scores of new NGOs were born, older, more mature agencies were forced by the media to respond with basic relief activities with power accruing to those which had the most polished access to the European and American television audiences.

Because of their photogenic nature, droughts have probably been the most powerful stimulant toward a power shift within the NGO community and between the NGO community and the various related/interested, western governments. For example, within the US family of NGOs, it is clear that World Vision has gained in strength and favor with the American Government at the expense of Catholic Relief Services, one of the older US agencies which depended heavily on collaboration with the US government for its financing and effectiveness.

It is too early to conclude in definitive terms what the latest 'shifts' mean for NGO activity. At the very least, NGOs have become more efficient, they have become more sensitive to western media stimuli and one suspects that they may have seriously out-paced their own hard-earned sensitivities with regard to learning with and from the non-western world as it moved toward development.

During time of drought and the massive response from the western NGO world, there is the clear sense for the sensitive observer, that power quickly moves to the 'north and west' with their telexes and efficient telephone connections. The net effect of these shifts, if one may hazzard a tentative conclusion, is that what is now called the third world is somehow kept off balance by the NGO thrust and by the discontinuities effected by that thrust.

2. What Do the NGO Do ?

As indicated above, the NGO community in the post-world-war-development-decades period was generally moving from relief/rehabilitation toward development. That pattern, assuming that it was more or less desirable and mature, was hijacked by media drought.

Apart from that pattern, there are both older and newer NGO activity patterns. One thinks of the missionary/church support for educational and medical facilities. This category of activity has to varying degrees been co-opted by increasingly able governments. A category closely allied, but less incorporated by governments are those activities which can generally be called 'welfare', i.e services for the dis-abled or handicapped. Those are among the older and more familiar NGO activities. They are not attractive to governments and thus have generally not been taken over.

The newer, more developmental NGO activities include innovations in all manner of training, both institutional and non-institutional. Credit facilities are being offered together with related services. Some NGOs seem to combine what are here referred to as the older and newer categories. For example, there are those agencies which stake out their territorial and categorical claims, proceeding then to service all aspects of the communities they touch. There is little expectation that government will eventually co-opt these services. Unchecked such service conglomerates grow in size, creating in the process increasing dependencies.

By far the most creative NGO activity has to do with that elusive notion of networking. As it is practiced by growing numbers of individuals and agencies, networking tends to be performed by a non-hierarchical structure, comprising of a swift transfer of skills and information without any claim to finality or correctness. Resources thus passed along are not 'owned' by anyone and becomes 'power' only if used. But even then, power accrues to the client applying the knowledge/information; it does not accumulate around the network or the instigators of the network. In short, networking is powersharing on a highly decentralized basis.

So far certain topics have lent themselves better to networking than others. For example ecological concerns have moved very rapidly through the networking system in part because, like motherhood, few can argue effectively against significance.

3. Top Down Versus Bottom Up Development.

Until now the most visible trajectory of the NGO movement has been from the top down, this in concert with by far the largest portion of the development effort. Governments, international organizations of all types have in general assumed that the 'bottom' (the poor, the peasant, etc.) is by a variety mechanisms reached from the 'top'.

This trend is understandable in the context of the need for consensus vis-a-vis the imperial world and in the context the variously perceived need for over-arching ideologies. But with the differentiation of the change/development process (more actors, more directions, varying assumptions) there has emerged a new awareness of the powerful, resilient, but largely nameless 'bottom', the vast peasant community of the African continent.

Everywhere rural groupings are astir, aspiring variously toward development, huddling for community, tooling for change. Left to themselves they tend to organize around neo-traditional leadership/authority patterns, moving quickly or slowly, depending on so many social dynamics.

Given the need of governments for control, in the name of creating states, there is the open question of how to handle the growing movement from the bottom.

Even in those instances when a government chooses to co-opt the bottom-up movement (for whatever reason) there is still the ambivalence of non-formal dynamics at work in these 'botton' communities. In particular, there is ambivalence with regard to the function of community rituals and the relationship between rutuals and the active change patterns/possibilities in a given community.

New development critiques talk of the 'with-drawal of the peasant' from the formal sectors. Others counter by noting that the peasant community had not ever committed itself wholly to the modern sector. Still others insist that the modern sector is loaded to capacity, that it cannot expand effectively, thus leaving growing majorities to 'fend for themselves'. For whatever reason and by whatever analysis, the neglected majorities are taking things into their own hands and moving. For governments it will become a question of recognizing the strength of this movement and deciding to ignore or co-opt (by what name and by which administrative device), resulting in degrees of control, liberation, or stagnation.

NGO communities are faced with the same dilemmas. If they choose to inter-act with host communities on a top-down basis, it can only be considered that they are in a heavily crowded field of actors, each carving out territory. If they choose to take the bottom-up direction, they will need to decide how this translates into relationships with host communities and into methodology/technique. Overall there will be the political hand of government, monitoring this amorphous, greatly varied 'bottom' community.

4. Relationships, Values, Accountability.

With the proliferation of NGOs, there is literally no predictable or general relational profile characterizing the NGO community. As indicated earlier, media events such as droughts enbolder NGOs temporarily de-sensitizing them to local/host nuances.

Where then can one expect predictability or control/direction to be lodged ?

The most obvious control or monitoring point for NGO activity lodges with the host government. NGOs are notorious for not being able to coordinate amongst themselves. And NGO consortia of various kinds have been unstable and unwieldy.

If host governments decide to take on the role of monitor/coordinator for the NGO community, there is the question whether that role should be toward control or toward guided creativity. So far it is generally a case of NGOs seeking out host countries and host communities. Left on their own, they aim for activities/projects/relationships which provide maximum room for maneuver and minimum interference from the host government. In short, the initiative has so far been with the NGOs. And in general, the NGOs know much more about their intentions than do the host governments, in part because the NGOs have the initiative and have given much thought to their strategies. The same cannot be said nor expected of host governments, if only because of the multiplicity of NGO agencies. A partial solution for host governments could be found in the designation of clear priority categories in which NGOs could function/innovate and to which they would be actively invited, thus shifting initiative to host governments and host communities.

The whole of the NGO relational questions can be seen as a series of trade-offs. NGOs operate best in an uncontrolled environment, but some governments cannot handle the uncontrolled proliferation and activity of NGOs. So NGOs stay away.

If there were one general recommendation to be made to host governments as the primary control or check points on NGOs - it would be that they should invest vastly more in understanding the NGO community, they should take initiatives to elicit from the NGO community those skills and resources which conform best to national goals. But if host governments are very clever, they will also see in the range of NGO choices, the possibility of farming out innovative roles, roles which if properly designed and placed can be carried out in politically non-threatening fashion, but innovative nevertheless.

5. NGOs Operating in Machakos District

a. Data Base

This part of the study seeks to understand what NGO's are operating in Machakos, their strengths in development and methods of coordinating their activities among themselves and between themselves and public institutions.

This part relies on data from a questionnaire designed by the consultants and distributed to a NGO/GOK coordination meeting called by Machakos DC during the first quarter of 1985. In spite of the fact that as many as 50 attended, only 9 had returned the questionnaire after one month. The data was needed to facilitate thinking about the role of NGO's during the rollover planning period beginning in June 1985. A draft report presented this data before the DC Machakos sent another appeal to NGO's operating in Machakos to send in their writeups. This second appeal led to 20 NGO's submitting unsystematic writeups. We have culled data from these two varied responses which we present in the analysis in this chapter.

Whereas the returns show that 20 NGO's are operating in Machakos, in 1985/1986, the list is not exhaustive. Nevertheless, most of the biggest and important NGOs are covered. The NGOs whose operations in Machakos are analysed are:-

1. Christian Children's Fund
2. World Neighbours
3. Amref - Kibwezi
4. United Nations Children's Fund *
5. African Inland Church
6. Machakos Catholic Church Diocesan Development Office
7. Kenya Commercial Bank*
8. National Council of Churches of Kenya
9. Institute of Cultural Affairs
10. Action Aid

11. Salvation Army
12. Catholic Relief Services
13. Redeemed Gospel Church
14. Maendeleo ya Wanawake
15. Care Kenya
16. Oxfam
17. World Vision International
18. Technoserve
19. The Christian Foundation of Kenya
20. Malila Welfare Association

(* Denotes organisations which strictly speaking are not NGOs)

A number of NGOs presented insufficient, incomplete and inadequate information on their structure and operations. For instance most NGOs do not reveal their operating budgets and finances. Consequently, the consultants were not in a position to present a complete picture of the NGO's and their operations. However, all the available information is utilized in such a way that a fair picture of organisations is portrayed.

In evaluating the above NGOs, the following issues and parameters are critical; NGOs' affiliation and incorporation; human, technical and financial resources; operational scope e.g. development sectors, projects and activities and lastly the NGOs organisation and modes of operation.

b. Incorporation/Affiliation:

Most non-governmental organisations are required to operate according to some laid down legal and institutional framework. Of the twenty (20) NGO's examined, eight of them (40%) are locally incorporated whereas the other twelve (60%) are internationally incorporated.

Table 1 : Type of incorporation of NGOs

N=20

Type of Incorporation	No. of NGOs	%age
Local	8	40%
International	12	60%

The locally incorporated NGOs have their operational headquarters based in Kenya with a number of branches in various parts of the country; Machakos inclusive. The internationally incorporated NGOs on the other hand are merely locally based branches, with headquarters in another country, and sub-branches in various parts of the country (Kenya), Machakos District inclusive.

From the legal and institutional point of view, the two types of affiliation/incorporation cited above, may have a bearing on the availability of human, technical and financial resources and on the scope and mode of operation. It is for instance common that NGO's which are internationally affiliated usually get their funding from external sources mainly whereas the locally affiliated NGO's generate some of their funds locally. In most cases the international NGOs are in a relatively better position to generate more funds and have relatively large scale operations.

c. Personnel and Technical Resources

With respect to resource bases and sources, there are basically two kinds of related resources which are critical to the performance of NGOs in development. Firstly, there are the personnel and technical resources.

The size of an NGO is partly reflected by the types and numbers of personnel employed, and in this case professional, non-professional, foreign and local. Similarly, the staffing and organisational structure of

an NGO are key aspects which influence and often determine its effectiveness and efficiency.

All the NGO's examined, except one, report to have some professional personnel in their establishments. As will be shown later on, it is imperative that an organisation has some staff with specialized training and experience in some specific fields in order that the organisation effectively and efficiently executes its programmes and projects.

An examination of the NGO's studied reveals that the presence of professional personnel varies from one NGO to another. It is evident that ten (10) (50%) of the NGOs have a reasonable and substantial number of professionals. These include Christian Children's Fund, Kenya Commercial Bank, Machakos Catholic Diocesan Development Office, National Council of Churches of Kenya, Institute of Cultural Affairs, Catholic Relief Services, Maendeleo ya Wanawake, Care Kenya, World Vision International and Technoserve. In this respect, it is important to note certain crucial factors like size, types of activities and projects, specialization, and availability of financial are important considerations which influence and determine the presence of professionals in an establishment.

As expected, local professional personnel are reported in almost all NGO's and in addition, the number of locally employed professionals is by far greater than the foreign professionals. As cited earlier on in the introduction, most NGOs do not give the number and a breakdown of the personnel employed. Nevertheless, from the few NGO's that provide this information, a representative picture can be derived as shown in the table below.

Table 2 : Distribution of Professional Personnel employed by types and numbers.

Type of Professionals	Number	Mean	NGOs
Local	251	31	8
Foreign	30	5	6

However, the above figures refer to all professionals employed both in Machakos and other areas where the NGOs have programmes and projects.

Table 3 : Distribution of professional personnel employed in Machakos .

Type of professionals	Number	Mean	NGOs
Local	71	12	6
Foreign	7	2	3

Table 3 above presents the number of professional personnel employed in Machakos. It is important to note that the information presented in Table 3 is derived from very few NGO's and may therefore not necessarily be representative of all NGO's. The information however gives the magnitude of the employment of professionals.

However, several pertinent points ought to be made. First is the point that NGOs still employ roughly 1 foreign professional for every 8 Kenyan professionals nationally and one foreign professional for every 10 locals in Machakos. We have no data to explain proportionally why more foreigners are employed in Machakos than nationally. Our recommendation to the DDC is that this situation needs monitoring in the long run so that Machakos NGO programmes do not become foreign employment havens.

The other point worth stressing is that Machakos has commanded a disproportionate share of both local and foreign NGO professionals. On the basis of population the district should not have more than 24 NGO professionals yet it has 78! This prepondarence of NGO professionals working

in Machakos is commented upon by National GOK officials. We are not convinced it is taken advantage of by Machakos DDC. Hence we recommend that the DDC takes advantage of this available resource in the District and utilises it for accelerating the development pace particularly in those areas where NGO's have technical competence and flexibility in programming and budgetary allocation.

Professionals perform specialized services in various development sectors that NGOs are engaged in. The greater the variety of development sectors an NGO operates, the more likely an NGO is to employ more professionals. Likewise, the more specialized the agency's involvement, the more likely it is to employ professionals. In the former category are NGOs like Institute of Cultural Affairs, Action Aid, Catholic Relief Services, Maendeleo ya Wanawake, Care Kenya, World Vision International and Machakos Catholic Diocesan Development Office. In the latter category are NGOs like Technoserve, Amref, United Nations Children's Fund and Kenya Commercial Bank.

In addition to professional personnel, most organisations inevitably require the services of support staff. In Table 4 below, the numbers of support staff employed by some organisations is presented. Incidentally only a few of the NGOs report the numbers of subordinate staff employed.

Table 4 : Subordiante staff employed by NGO's in Machakos

	Number	Mean	N
Subordinate staff	280	56	5

Inspite of the fact that NGO's employ more of support staff than professional personnel they clearly are not to be looked for as a source of employment generation!

d. Financial Resources

Financial resources available to an organisation are very critical to the performance of such an organisation. An overall budget for an NGO reflects the financial resources available to the NGO. The budget usually consists of two components viz. the recurrent budget and the development budget. Whereas recurrent budgets avail funds for short-term operational activities, capital budgets on the other hand are developmental in nature. As is usually the case, it is not easy to get financial information pertaining to organisations. Out of the twenty NGOs studied, only eight (40%) provide information on the size of their annual budgets in Kenya. Reported total agency's annual budget in Kenya is given in Table 5 below.

Table 5: Reported Total Agency Annual Budget in Kenya

Agency	Total Annual Budget (Kshs)
1. Christian Children's Fund Inc.	60 m
2. Amref - Kibwezi	100 m
3. United Nations Children's Fund	15 m
4. National Council of Churches of Kenya	5.7 m
5. Insitute of Cultural Affairs	4.0 m
6. Redeemed Gospel Church	.35 m
7. Oxfam	.75 m
8. World Vision International	10.00 m
Total	<u>195.80 m</u>

Furthermore, judging from their sizes, coverage and operations, the following NGOs seem to operate substantial budgets; Catholic Relied Services, Care Kenya, Action Aid, and Machakos Catholic Diocesan Development Office.

Overall, the reported NGOs' annual budgets seem to be quite substantial on the face of it but realistic and actual adequacy would largely depend on how wide the NGOs operations are in Kenya. Since the reported information

on NGO budgets does not indicate any budgetary breakdown with respect to operations, one is therefore not in a position to assess the impact of the budgets on NGO's programmes, projects and activities. A few of the NGO's however reported some breakdowns as in Table 6 below:

Table 6: Reported Annual Agency Budgets (Machakos)
(Kshs)

Agency (NGO)	Total	Admin.	Vehicles & Equip.	Mat.	Other
1. C.C.F.	5,660,000	-	-	-	-
2. Amref - Kibwezi	1,978,610	1,011,230	383,130	-	584,250
3. U.N.C.Fund	2,250,000	337,500	2 vehicles	-	-
4. K.C.B.	6,598,915	6,156,315	322,600	120,000	-
5. N.C.C.K.	324,600	128,600	48,000	148,000	-
6. Inst. of Cultural Affairs	360,000	30,000	10,000	100,000	220,000

It is our conclusion that the above information is not reliable and therefore no accurate and reliable conclusions with respect to budgets and their relationship can be derived. Our recommendation is that the DDC should insist that NGOs operating in Machakos should submit budgets in a format similar to the questionnaire prepared to enable it to make decisions on unit costs of providing specific services.

e. Development Sectors

As discussed earlier on, the numbers and types of personnel employed by an organisation at all levels are key aspects which influence and to an extent determine the NGOs effectiveness. The capability and capacity of an NGO to get involved in various development sectors requires the NGO to have specialists in such sectors. As noted before, the existence of various professional personnel varies from one NGO to another. This in turn relates to the types and

magnitude of development sectors that the NGO can effectively engage in. The involvement of an NGO in development Sectors may be analytically looked at in two ways. First, one may examine the spread of a particular category of specialists in all NGOs and secondly one may examine how many different categories of specialists the NGO has at its disposal. These approaches may be indicative of the extent of NGO involvement in development.

With respect to the spread of categories of specialists, Table 7 below enumerates the different categories of specialists that all NGOs have at their disposal.

Table 7 : NGOs involvement in specific sectors in Machakos

<u>Development Sector</u>	<u>No of Specialists</u>	<u>% of NGOs reporting</u>
1. Health	509	60%
2. Community Development	309	70%
3. Domestic Water	71	50%
4. Irrigation	0	0%
5. Agriculture	88	40%
6. Agroforestry	0	0%
7. Food Storage	20	11%
8. Education	11	50%
9. Food Distribution	71	45%

While the above presentation may not fully indicate what happens with every NGO's involvement, it is nevertheless indicative of the general situation prevailing among NGOs. The relative emphasis by NGOs in certain development sectors is partly a response to the expressed and felt needs of the communities served.

From the above presentation, five development sectors viz (1) Community development, (2) health, (3) water development, (4) education and (5) food distribution, have heavy NGO involvement.

Indeed, the above sectors may reflect areas where rural people face problems most and NGOs relative emphasis in such sectors seem to be a response to the problems implied. The number of specialists employed may also to an extent be indicative of the magnitude of the development sector. However, caution must be taken not to overly rely on this parameter alone since in the first place some NGOs do not indicate the number of specialists employed and secondly some specialists may simply be more readily obtainable than others. We are not convinced that Machakos needs that many community development specialists given the fact that GOK has many. We recommend that the DDC effectively bars hiring of more by all NGOs immediately.

It is important to note that irrigation and agro-forestry specialists are lacking in NGOs reporting. This is a serious omission and our recommendation to the DDC is that they should request NGOs to look for those specialists for there is need for agroforestry and small scale irrigation specialists in Machakos.

In further analysis we examined each NGO with respect to the number of different categories of specialists employed.

Table 8 : Agency (NGO) involvement in Development Sectors

Agency (NGO)	Total of specialists	No. of specialists not indicated	No. of Dev. sectors in which NGO has special- lists N=9
1. Christian Children's Fund	9	-	11%
2. World Neighbours	-	✓	22%
3. Amref	-	✓	33%
4. United Nations Children's Fund	4	-	33%
5. African Inland Church	-	✓	not indicated
6. Kenya Commercial Bank	-	✓	11%

Agency (NGO)	Total No. of specialists	No. of Specialists not indicated	% of dev. sectors in which NGO has specialists
7. Machakos Catholic Diocese	973	-	77%
8. N.C.C.K.	12	-	44%
9. Inst. of Cultural Affairs	22	-	22%
10. Action Aid	-	✓	33%
11. Salvation Army	-	✓	33%
12. Catholic Relief Services	-	✓	55%
13. Redeemed Gospel Church	-	✓	22%
14. Maendeleo ya Wanawake	-	✓	22%
15. Care Kenya	-	✓	44%
16. Oxfam	-	✓	66%
17. World Vision Int'l	-	✓	77%
18. The Christian Foundation of Kenya	-	✓	33%
19. Technoserve	-	✓	11%
20. Malila Welfare Ass.	-	✓	44%

It is clearly evident that Machakos Catholic Diocesan Development Office engages specialists in more development sectors than any other NGO except World Vision International. The Diocesan Development Office employs specialists in seven out of a possible nine development sectors. It also has the highest number of specialists employed per development sector.

Other notable NGOs include, World Vision International, National Council of Churches of Kenya, Catholic Relief Services, Oxfam and Care Kenya.

Table 9 : Agency (NGO) involvement in implementation of projects in Machakos

Agency (NGO)	Total No. of Projects	No. of projects not indicated	No. of project types implemented
1. Christian Children's Fund	19	-	3
2. World Neighbours	3	-	3
3. Amref	4	-	4
4. United Nations Children's Fund	4	-	4
5. African Inland Church	12	-	2
6. Kenya Commercial Bank	1	-	1
7. Machakos Catholic Diocese	80	3	11
8. N.C.C.K.	-	6	6
9. Inst. of Cultural Affairs	5	-	2
10. Action Aid	-	✓	5
11. Salvation Army	-	✓	3
12. Catholic Relief Services	-	✓	4
13. Redeemed Gospel Church	-	✓	4
14. Maendeleo ya Wanawake	-	✓	6
15. Care Kenya	90	-	4
16. Oxfam	6	-	4
17. World Vision Int'l	11	-	5
18. Technoserve	-	✓	3
19. The Christian Foundation of Kenya	-	✓	1
20. Malila Welfare Ass.	-	✓	3

A comparative analysis of NGO involvement in the implementation of projects does not reveal extreme differences among them. First, all NGOs are involved in the implementation of at least one project type. Some NGOs are however involved in the implementation of many project types. It is also evident that within each

project type e.g. community water project, an NGO may be operating one or more projects; for instance 59 water projects have been implemented by Machakos Catholic Diocesan Development Office alone. However, there isn't sufficient information provided by all NGOs on the number of projects being implemented under each project type. Consequently, it is not possible for us to make a water-tight assessment on this basis. Our recommendation to the DDC is that it should insist that NGOs specify project types in greater detail. For example in water sector they should indicate whether project provides roof catchment, tanks, subsurface dams, gravity piped systems, dams e.t.c.

f. Coverage (Population)

In this section, the number of people served by NGOs and by project types is presented. Once again the information given below is incomplete and inadequate but all the same gives a general picture of the scope and coverage of organisations' activities. In some cases, estimates and approximations (derived from NGO blurbs) rather than exact figures are given.

1. Amref - Kibwezi Rural Health Scheme

<u>Project</u>	<u>No. of people served</u>
(i) Curative services	Integrated approach
(ii) Preventive (a) Mobile	
(b) Outreach	120,000
(iii) Promotive (a) Community Health Workers	-
(b) Traditional Birth attendants	-
(iv) Family Planning	-

2. United Nations Children's Fund

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
(i) Water and Sanitation	30,000
(ii) Seed project	30,000
(iii) Nutrition Surveillance	30,000
(iv) Food Storage	30,000

3. African Inland Church

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
(i) Christian Children's Home (7)	
Kangundo	155
Mukaa	144
Mbooni	90
Kathonzweni	91
Mtito-Andei	48
Kima	29
Makutano	51
(ii) Village Polytechnics	
Myumbani Village Polytechnic	-
Ngelani Village Polytechnic	-
Kangondi Village Polytechnic	-
(iii) Primary Boarding Schools	
Makutano	-
Kathonzweni	-
(iv) Dispensaries	
Mbooni	-
Mukaa	-

4. Kenya Commercial Bank

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Machakos Town and Athi River	9,284
Tawa and Kikima	586

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Nunguni	422
Kibwezi, Makindu, Emali	1,810
Mukuyuni, Kilala, Wote, Matiliku	1,421
Masii	655

5. Machakos Catholic Diocesan Development Office

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Food Distribution (19 centres)	26,600
Agriculture (165 groups)	5,000
Adult Literacy (214 centres)	6,420
Women (722 groups)	25,340
Savings & Credit (3 societies)	1,802
Water	21,000
Youth	26,000
Family Life (National Family Planning)	400 couples
Parents - Teachers Leadership training	180
Education - Primary, Secondary - Catholic Sponsored	120,000
Small homes (physically handicapped children)	36

6. National Council of Churches of Kenya

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Water conservation	Not indicated
Reafforestation	"
Seed multiplication	"
Famine Relief	"

7. Institute of Cultural Affairs

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Iveti North and South Projects	150,000
Kangundo Location Impact Project	-
Muthetheni Location Impact Project	-

8. Action Aid

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
School Construction and Furniture Provision	40 schools
Feeding Programme	-
4-K Clubs	-
Women Groups	10 women groups

9. Salvation Army

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Income Generation (4K Clubs) (Polytechnics)	-
Church Development	-
Child Survival Projects	20 villages

10. Catholic Relief Services

Agricultural & Economic Development Projects	-
Community Development Projects	-
Educational Development Projects	-
Health and Sanitation projects	-

11. Redeemed Gospel Church

Famine Relief	-
Seed Distribution	-
Farming Equipment Distribution	-
Family Centred projects	800 families

12. Maendeleo ya Wanawake

Tree planting)
Maternal Child Health & Family Planning)
Nutrition)
Energy Conservation)
Income Generation)
) Many women groups

13. Care Kenya

<u>PROJECT</u>	<u>NO. OF PEOPLE SERVED</u>
Water development	56,000
Education (Primary School Programme)	2,100
Youth Polytechnics	750
Women (Income Generation)	200

14. Oxfam

Kibwezi Division Women's Group	-
Drought Relief Programme	26 parishes
Animal Husbandry project	3 villages
Utooni Development Project	-
Amref Drought Relief Programme	-
Ukambani Programme	8 groups

15. World Vision International

Kamuthanga Project	800 families
Kawethei project	-
Tei Yumbuni Project	-
Myumbuni Project	-
Masinga Project	-
Muthwani Project	-
Vulya project	-
Lumbwa project	-
Nzani Project	-
Kalawa Project	-
Ngelani Project	-

16. Technoserve

Drumvale Farmers Cooperative Society Ltd	1,400 shareholders
Nguu Ranching cooperative Society	-
Business Advisory Services in Kenya	-
Community Enterprise Promotion and Investment Services	-

17. The Christian Foundation of Kenya

Economic/Income Generation	-
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18. Malila Welfare Association

PROJECT -----	NO.OF PEOPLE SERVED -----
Sponsorship/scholarship	--
Emergency Relief	--

A number of observations can be made from the information in the tables above. First of all, all projects reflect a response to a need or a problem of development. Whether this was generated in the community or within an NGO is not clear from the data.

Secondly, most projects claim to be family or children oriented.

Thirdly, some NGOs projects are targeted to specific populations. For example AMREF only runs health services.

Fourthly some NGOs claim to run broad based projects which emphasise intergrated development. Among these are UNICEF, Machakos Catholic Diocesan Development Office, Care Kenya, CRS, and World Vision International. A good number serve substantial numbers of people but the data does not allow us to aggregate it or for that matter to analyse it in terms of other details. We are of the opinion that many programs are of the welfare type which is hardly developmental and our recommendation to the DDC is that it should closely monitor these for they encourage dependency. The DDC should only encourage projects which are clearly developmental probably with a bias to women and children.

The majority of NGOs operate more or less in the same place especially in Kibwezi Division. From field work we know this came about as a result of using the AMREF program as entre. This is not only unhealthy but totally unacceptable from an equitable district development point of view. We are totally opposed to this. Our recommendation

to the DDC is that it should insist that some NGOs move out of Kibwezi Division and serve other equally needy areas.

g. Coordination

In some other aspects, the effectiveness of NGOs is also determined by the linkages the NGO has with other NGOs, government and rural people. Of curcial importance is the extent to which the NGO is able to enlist the support and participation of the community and its experiences in liaising with government ministries and other organisations involved in development. NGOs were requested to indicate the bodies with which they plan and implement projects. The responses reveal that harambee groups, traditional thome groups, community development office and locational, divisional and district development committees rank high. The bodies mentioned seem to represent a fair spectrum of the important organs in the rural areas.

NGOs are coordinated with many other bodies in the planning and implementation of projects. Development committees at all levels play a crucial role in coordinating NGO development programmes. This is even more important now that there is decentralisation; the district focus strategy. Churches also play a crucial role in coordinating NGO activities.

Inspite of the organisations identified by NGOs above as program delivery channels and planning and project coordination institutions, in our field work we were told by NGOs, Government Officials and community groups that more often than not they did not know what agencies were working where. This is a major problem for the DDC and our recommendation is that it should insist that the District Focus mechanism of discussing all projects (from preplanning to evaluation) at sublocational, locational, divisional and district development committees should be enforced. Our

second recommendation is that members at various levels will have to familiarise themselves with the projects in their environs and know how they interrelate. To assist the various development committees in this quest we further recommend that the DDC request one NGO in conjunction with GOK, to fund training seminars on development of the district to be organised by specialists on Machakos District.

h. Desired Coordination Changes

It was further requested of NGOs to suggest changes in organisational relationships the agencies would welcome in Machakos so as to improve coordination in development work by NGOs and government departments in Machakos. It is the view of NGOs that regular formal meetings be held between NGO's and government departments with a view to sharing ideas and experience.

Secondly, NGOs feel that there should be more coordination and integration between NGOs and government through the DDC. One of the measures suggested is formal and informal representation. The NGOs further contend that there is need for coordination and integration with others and between NGOs themselves especially at the grassroot level. Sharing of information, experience and resources were emphasized.

NGOs also indicate certain ways through which they would like to work. First, a number of NGOs wish to work through multipurpose structures e.g. churches (44%). A number of other NGO express the wish to work through the integrated community development approach.

On the whole, most NGOs express the desire for coordination and integration of their activities. NGOs also seem to be agreed on the channels and avenues through which such coordination and integration can be attained.

It is clear that few NGOs coordinate their projects on the ground. This is an area where the DDC can play a catalytic role by insisting that there be specialised sector (e.g. water) coordination.

Since completion of the field work NGOs have met under the umbrella of Kenya National Council of Social Services, Machakos branch. This is a first attempt at beginning to know what each NGO is doing in Machakos. This is desirable and our recommendation is that this effort should continue.

However, much more program development coordination in specific sectors needs to be undertaken by NGOs. There are cases where different NGOs are working on water projects in the same area (e.g. Kibwezi, Kibauni). Usually each NGO has its preferences in terms of particular technologies in one sector. We know of areas where one NGO is pushing ground water tanks, another subsurface dams and yet another two different designs of roof catchment water tanks. All this is taking place within the same community. How is that community to absorb all the technology? Why should NGOs split members of a community by peddling "their" unique technology?

The solution to problems of various competing projects in specific sectors will only be found if the NGO committee develops specialised sector committees who will meet with appropriate members of the District Executive Committee to plan technical and siting of sector projects. We recommend that the DDC implement this process immediately by requiring that the NGO coordinating committee is organised into sector subcommittees who will present formalised plans to the DEC.

6. Case Studies.

a) Isololo Water Project.

The Machakos Catholic Diocese Development Office among other things has operated a water development section since 1976. The head of this unit has usually been a Dutch volunteer. We are told that this volunteer, usually an engineer, was made available to Machakos Catholic Diocese with an understanding that he would be available for use by the District officials be they from the Ministry of Water Development or other ministries who desire the service, through R.D.F. Although 70% of this total time is supposed to be spent in R.D.F. oriented work, there has not been that demand so the bulk has been spent in DOM work. The current volunteer states that there are relations between DOM and the Ministry of Water Development people in Machakos.

The largest and most extensive project where the DOM Water Engineer has been involved in is the Isololo Water Project at Nzau. This is a project which taps a spring from Nzau Hill. Although the actual construction started in November 1983, there was a longtime buildup to the project.

The procedures for applying for assistance DOM Water Development section are straight forward. Anybody or group can go to the Development Coordination Office, located next to Machakos Minor Cathedral and ask for a form. After payment of Shs.100 - which goes to paying for considerations, the personnel in the office go out to 'survey' the project. Incidentally the Dutch Volunteer has a local assistant. If the project is viable from a technical point of view, the water office does a report on it and so informs the people who are concerned.

On simple family galla water tanks (build with only crushed stone reinforcement as opposed to ferro concrete) the individual or group pays about Sh.1,000 although the unit cost is usually about Sh.1,800.

The balance is covered by donor funds. Usually unless the project is big the donor funds are held in Machakos (up to Shs.10,000). If projects cost more than this then donor funds are solicited overseas by the DOM without participation by those demanding the project.

The Isololo project is a big project. The funds for the construction were solicited overseas after the local self help committee had contributed materials (sand, crushed stones, bricks) unskilled labour and last but perhaps most important digging of 25km of trenches.

Before construction started in July 1984, the Isololo water self help group had spent many months organising. Although the press has stressed the role of the Project Chairman - Boniface Kyengo, (Nation Wednesday March 6th p.15) the community argues that what made the project possible was the serious discussions which had taken place among themselves for many years. It is true that the fact that this was a drought year and food for work provided by DOM was used to attract people daily (five teams each working one day only) should not mask the primacy of the community commitment. It is estimated that at peak construction time, 850 people were on site daily.

They are the ones who did not want their women/children to walk the six to ten kilometres daily looking for water. The convincing of a community though about how to organise to ensure that this is done takes a lot of time, solid leadership trust as Kyengo commands, and lots of structured and unstructured discussions. These are the details few development workers ever cost.

To argue that is not to minimise the significance of DOM in soliciting donor funds. They have the expertise. CEBEMO of the Netherlands and MISERIOR gave a grant of Shs.360,000. through the DOM to be used for buying materials - cement, pipes.

The DOM through other funds did provide for the transport and upkeep of the engineer.

Usually it is hard to come up with specific cases of coordination between the GOK and NGOs. In the case of Isololo, the survey work was undertaken by surveyors from Ministry of Water Development at Machakos.

The details of technical design and construction of Isololo are as important as the social design which made it possible. Since the spring is almost at the top of Nzau Hill a road had to be made up this steep hill to get materials and construction crews to the spring.

The design is simple. Since the people live in the lowlands, water could be brought down the mountain by gravity. This type of design is important in the long run for many projects do not operate after construction for there usually is no diesel for the pump, the pump breaks, and committees which work so hard during construction cannot raise funds, donors on their part are not interested in maintenance costs. Isololo is providing water to at least 10,000 families or close to 100,000 people at relatively little initial investment cost and almost no maintenance cost.

It is an innovation that Isololo is a gravity system. There is room for many more of these types of projects in the district. It is one of the ironies of the discontinuities in development thinking that the mountain springs which were mapped between 1947 and 1960 by ALDEV, springs which were legally protected and catchments of which adequate afforestation projects were started by both ALDEV and the A.D.C., were allowed to deteriorate so much that there are few Isololos remaining. Yet the point is simply that gravity systems are within the reach of community harambee groups with a little bit of technical and grant help.

It seems to us that the DDC ought as a matter of urgency to inventory the springs with gravity system potential and protect them now.

In-terms of linkages between NGOs and government departments, the Isololo experience is also significant from the point of view of showing the limitations of the RDF funded projects' procurement methods.

Whereas funds for Isololo from external NGOs administered by DOM were easily used in procurement there have been significant delays in the authorisation of RDF funds, thereby delaying procurement. These funds are supposed to finance materials for construction of another gravity system from Nzau Hill to Matiliku.

The Matiliku project is a DDC Project funded partly by RDF (Shs.100,000) and Miserior (Shs.150,000). These funds are not enough to complete the project but that is not the major problem in implementing. The delays in release of RDF funds have slowed the construction.

This is a cost. At the community level, once the people are geared to implementing a project, it should be done immediately for their convictions are not just random behaviour. They fit into time and space opportunities, production schedules and even in some circumstances major environmental factors like drought. Most of the development field people in Kenya point out that every time there is a major drought, people are not only willing to do development work but are also more creative about it. These are peculiar time and space opportunities which are not very well researched but which if not taken advantage of disappear into the miasma of rural life - never to be retrieved or re-lived.

R.D.F. is an instrument for the D.D.C. to use in priority project areas. It seems to us that its operation could borrow from the NGOs in terms of rapidity of procurement and implementation. The Matiliku project was delayed for more than 6 months because of slow paperwork within the RDF system. This is a major cost.

Still on design, we should note that GOK and Donors have major disagreements in policy on the manner of using piped water. GOK insists that piped water not be charged. Sometimes this is confused with individual metering.

Non-NGO donors, particularly foreign government aid agencies and the World Bank have insisted that for GOK to recover its investment, it must not only charge but rely totally on individual metering.

This donor position ignores the fact that many who have individual meters end up using the water for purposes other than those intended. The major one is irrigation. Where there are such schemes, those beyond the major irrigation points usually never get enough water for domestic use. Kimutwa is a case in point.

Some work by donors derived from an econometric model, has argued that individually meter schemes with total ban and policing should lead to less water consumption than schemes with community waterpoints. Of course the problem is who is to do the policing. Ministry of Water personnel are thin on the ground and they have no clout on the elite who usually irrigate. Provincial Administrators don't fair better with the same elites even though they are thicker on the ground.

In this jungle of conflicting designed use assumptions, not based on longterm analysis of project water use, it is hard to come with concrete recommendations. However it seems to us as if the Isololo system where they charge individual families a flat Shs.10 per month for water use and where there are water kiosks situated in communally agreed points has a lot to offer.

It assures maintenance costs by charging. It further leaves room for individuals to get individual connections if they want but they bear all the costs. However there is a community water use monitoring system which ensures that the water is not used for irrigation.

It further monitors leakages. These are repaired by artisans trained during construction who are members of the community.

In sum community process which led to the construction of the water system takes total responsibility for maintenance including raising revenue for it and ensuring that maintenance personnel are there.

It seems to us that the Isololo system, and others like it, need to be studied to try and break the policy deadlock between GOK and donors.

Furthermore it seems to us that similar type of projects (gravity design and community (Harambee) implementation/maintenance methods) should become the special arena of NGO's in Machakos. They are complex enough to appeal to the NGOs who are interested in water. They are cost effective. Above all they are OWNED by the local communities who must develop the organisational frameworks for community construction, and maintainance (including provision of personnel).

Infact we recommend that the Isololo model community organisation should be used for initiating community irrigation project with sources other than springs.

b) Wendano wa Utumoni Mixed Group.

We would like to discuss this group as an example of how a community captures an NGO.

This group is at the eastern base of Kangundo Hill in Kangundo Location. Over one year period they have evolved a system of building galla water-tanks. However, there is a story behind the group.

Utumoni is bounded by two streams running from Kangundo Hill. They have historically been left out by their neighbours since their area was inaccessible. Infact after the galla water-tanks, the next community activity will be to construct a road through the UTUI to link them directly to Kitwii Town. To their east is the large market centre of Kivani.

Utumoni group is unique in the sense that they decided to form the mixed group specifically to attract resources from the NCK Rural Development Project. This project had been operating in the region for about 10 years. Significantly all the communities where the idea of covering all homesteads with these galla water-tanks were extended, never came up with a community strategy of how to do it and therefore to own the technology in ways the designers did not imagine.

Although it is the strategy of NCK to support community action it had not made a breakthrough in the region. NCK criteria for aiding a project are that there must be some minimum harambee spirit. The activities which it prefers in the rural development department are the covering of public springs.

Significantly this activity was identified during the 1974 drought as NCK sought to get its programs into dealing with longterm development issues for communities hit by drought. Significantly the NCK project coordinator for Machakos District is from a few miles from Utumoni village. Utumoni people knew of the project from inception. They also knew that a few individuals had paid for the galla water-tanks. Springs were protected, if the local communities raised some cash, were willing to do the 'usual' unskilled labour etc.

We do not know how many galla water-tank projects were done in areas immediately next to Utumoni but none were done by a community process as they are at Utumoni.

About two years ago, different people in Utumoni began to discuss how they could ensure that all the families got galla water-tanks. Ultimately after many community discussions, informally, the decision was made that the mixed group would be open to all families but the wife or wives and husband had the option to buy individual memberships. Each membership cost Shs.10 monthly. From these funds and whatever could be got from donors was to be used for financing water-tanks.

Who was to get a watertank first? This problem stands in the way of many development projects for the rural net (Robert Chamber's term) of the asomi and other influentials ensures many times that they are the sole beneficiaries. Usually they are not participants in bonafide community action which they see as serving others rather than themselves. Incidentally this offers opportunities to NGOs since genuine community organisations are never appropriated by the rural net.

Utumoni group made sure that every-member got an equal chance by balloting.

Each member picked a number (up to 71). That is the order in which the watertanks are to be implemented.

This is a significant break from the traditional system which would have set a criteria of poverty (inability to pay) or the net system which in many rural areas gives preference to the rural rich.

By balloting and passing a community binding resolution, that they will not embark on another development project until all the 71 members have had their watertanks, the group managed to generate strong community spirit. Infact officials have told us that it will not be necessary to build 71 tanks since some families with more than one member have decided that they will get some other resource (e.g grade cow) rather than a tank as their water needs are satisfied.

Building of galla watertanks has not been looked very positively by developmentalists in areas where the sawdust/wood shavings, which are necessary for construction, are not available. Utumoni made significant innovations. They initially were supplied by NCKK with wood shavings sufficient for building one galla watertank of 1,000 gallons. They decided that rather than waste this resource they (or more specifically their children) would carry it from site to site. Thus the original woodshavings are still being used in construction. We are told that since the numbers or more exactly the order of construction is known, the shavings get moved onto the next site on time, for Utumoni is organised. This activity brings the children into the development activity skein. Too often we forget that children need to be socialised into development.

It should be the envy of every development agency to see the 'industrial' organisation of building a galla watertank at Utumoni. They have broken the construction into five interdependent tasks which are done on the five successive working days of the week. By so doing they use the manpower resources most efficiently. More significantly their organisation also gives positive spinoff to the quality of construction as successive bits are allowed to cure before other bits are added. This is an innovation which did not come from the NGO donor. It was decided and operationalised by the community.

We said earlier that Utumoni is an example of how a community captures an NGO system and runs with it. Consider the fact that Utumoni was not approached initially by the NCKK as it had always been inaccessible.

Utumoni people argue they went to NCKK since they knew it had been trying to interest people in galla watertanks in the environs and it was not making progress. Their action, of seeking out NCKK, was essentially going raiding for existing resources - technical skills, financial resources for materials and above all ability to interest other donors.

On these resources to be raided people are clear. They had identified a donor resource. When we asked them why they only smile and say the resource was just wasting in the environs. Unlike Utooni which we discuss elsewhere there is not any evidence of a dominating personality as the prime mover. There is unique community action which was so powerful that even the local elites who really did not need the service had to join.

What of technical skills? The NCKK project in its program of covering springs and constructing sub-surface dams had identified an individual who had been trained in this work in ALDEV during the 1950's. This individual had been bypassed by the society, but giving him the construction and design responsibilities seemed to rehabilitate him. The same goes for many at Utumoni. This is an area which historically had individuals who knew a little of masonry and bricklaying. Their skills seemed to have gone moribund until the watertanks came around.

Now those skills have not only been rehabilitated but a synergy of skills seems to have taken place.

Masonry and bricklaying skills are not directly linked with building a galla watertank, especially when they were acquired on the job by individuals who cannot read technical drawings. Yet at Utumoni people with those skills are now the fundis in charge of construction. In some basic sense the technology of building the galla watertanks has been demystified as a result.

People of the community were confident they will be able to apply the same technology in other construction especially in building sub-surface dams - their next top priority activity. The water from sub-surface dams will be for irrigation of their crops and livestock. Again the people are thinking of activities which NGOs and the planning agencies are not yet dreaming about.

c) Utooni.

Utooni is a media event. Utooni was the lead story on CBS News report on the UN's 40th anniversary. Utooni has attracted stars - Harry Belafonte's daughter. Utooni is to go into film strips and video cassettes. Utooni is thus the hottest development activity in Machakos.

The above maybe all to NGOs and media looking for success stories. Yet there is more for those who participate and also those who want to think more seriously about possible real development in Machakos. This is what we would like all to pay attention to. Thus the balance of this discussion gives an outline of Utooni project. It is an outline simply because we believe that the development process taking place at Utooni is extremely complex and we did not have the time and resources to study it in depth. Infact we recommend that the DDC solicit funds - possibly from an NGO - for a comprehensive study of the development taking place at Utooni. Such a study will be not only useful to the district but to the rest of the nation.

Utooni started organising the community in 1978. More precisely one should say a Mr. J. Mukusya returned to the community after a short and varied work experience and started DIALOGUE ABOUT DEVELOPMENT with the community. Mr. Mukusya is a young man. It is therefore not surprising that the community looked at his activities and ideas with a dose of scepticism. How could this young man articulate development. After all there were more educated, experienced and knowledgeable people in the community.

Mukusya's initial message was beguiling by its simplicity. It was only that the COMMUNITY HAD TO WORK OUT ITS PRIORITIES and how they were to be implemented WITHIN THE CONSTRAINTS OF COMMUNITY RESOURCES. Development is for communities, by communities.

Between 1978 and 1980 no formal development work took place. The community discussed, argued and planned.

Since the community and the leadership (in the person of Mukusya) were jealous of being hijacked into other peoples development priorities, they were very cautious about entanglements. The first outside support they solicited was from the Ministry of Agriculture for soil conservation. This was appropriate for they were convinced that the first development priority was to conserve the land resource. Soil conservation assistance was sought in 1980. This enabled the group to actually implement some projects which were within the capability of the community. It was extremely important that the first collective activities succeed. They did.

No outsiders were involved. The Ministry of Agriculture technical assistants did not aid in the activities. Infact it was not till July 1985 that the T.A. showed up at Utooni. He was there only to guide the District Agricultural Officer who was visiting the area for the FIRST time.

The support which was given to Utooni by the ministry in 1980 was in materials. The leaders had to travel to Machakos to beg for the materials. No officials followed it to check on their use or even whether they got to the people they were intended. This is sad commentry on the ministry's staff and program effectiveness.

The leadership at Utooni sought out NCKK who had a program in the District for subsurface dams. NCKK gave materials for these in 1981 and Mukusya for a time was taken as the NCKK field staff. Several points are worth noting. First Utooni leadership went looking for help from an NGO which was around but which did not know Utooni. Second, Utooni had dim memories in the collective mind about the importance of subsurface dams both as sources of water and also as a conservation technique. The community had agreed to work on them for the two reasons. Third, the NGO, NCKK saw a resource person for maximising its field operation and grabbed him.

The net result of all the above points is that the community and the NGO were flexible enough to identify mutually beneficial actions. Why didn't the Ministry of Agriculture think of this ?

When the history of development of Kenya is done UNICEF's role in publicising appropriate technology out of Karen will feature. Mukusya and Utooni got to visit this site in 1981. Within the UNICEF system of appropriate technologies nothing was more central than the galla water jars. UNICEF pushed them in conjunction with water filters. The argument was that once households built the water jars , usually for collecting rain water, one needed to build the filter for filth would get in from the roof.

Utooni in its characteristic fashion challenged this UNICEF system. They accepted building the water jars but rejected building the filters. Filters would have cost K.Shs.400. This the community felt was too expensive for the benefits which were supposed to come from filtering contaminated rain water. The community accepted that building water jars would be a major qualitative jump as far as the contamination of water in the community was concerned. Rain water was a great improvement over the contaminated ponds, springs dams etc. Filtering it would not be cost effective. They thus rejected filters.

If one can argue that the first activities ie. subsurface dams and water jars, were expected, the next project at Utooni was dramatic and extremely radical in terms of the parameters within which Kenya thinks of rural development.

IN 1982 UTOONI INITIATED A RURAL COMMUNITY CREDIT SCHEME

Having begun to deal with soil and water conservation which made a platform for better food production, Utooni decided that to improve nutrition of the community they needed more milk in the community and more fertilizer to improve crop production. Thus the credit scheme.

It was to help the community to buy grade animals and fertiliser. The logic of this choice is flawless. Milk would improve nutrition. Fertilisers would improve nutrition as well as assure a surplus food for the market.

Who was to capitalise the credit scheme? Mukusya had been talking to World Neighbours about the nature of community based development from 1979 to 1982. World Neighbours brings to its projects a fundamental commitment that it is up to the communities to design and implement their own development. To World Neighbours, an NGO interested in development work, should be no more but a supplier of grease to assure smooth running of the development so designed. They thus agreed to capitalise the loan scheme with Shs.40,000 in 1982.

This loan scheme has a default rate of ONLY 2% from 1982 to 1985. It is therefore the complete antithesis of the rural credit systems where default rates are between sixty and ninety percent. All decisions on its operation and collection and reallocation (for now it is a revolving fund) are handled by the community.

By 1982 Utooni decided to create formal structure to handle their activities. One has to remember that during the first year - 1978 - only 200 families (or about 1,600 people) were involved. By the time of 1979 census about 10,000 people were involved. Currently (1985) Utooni activities cover the sublocations of Katanga, Iiuni and Mukuyuni. No formal census has been done yet to establish 1985 coverage but it is not unrealistic to estimate it as close to 20,000 people.

To handle these numbers of people sector specific department were created in 1982. They are :-

1. Livestock Development
2. Food Production
3. Water Conservation
4. Social Problems
5. Family Health
6. Food Storage Technology
7. Soil Conservation and Tree Planting.

Each department is run by a committee and has a secretary.

There is a Central Coordinating Committee whose membership is made up of the seven secretaries and 2 ex-officio members (Mukusya and Muia) who are really overall coordinators with Muia having special responsibilities in accounts.

Decisions on what is to be done are therefore discussed at the community level. If a problem is identified it is assigned the specific sector department to discuss, solicit further views and or send it for further discussion and resolution at community level.

Once a department has specific recommendation it moves the issue up to the central coordinating committee whereby activities, funds and work schedules are harmonised.

Such a rigid description of how decisions are made does not though do justice to the leadership style which allows and solicits community prioritization and involvement in execution.

What has Utooni achieved ? In our opinion the BASIC ACHIEVEMENT has been in ORGANISING AND ENERGISING THE COMMUNITY. This is unquantifiable.

This basic achievement should not be used to mask the obvious development outputs which are there on the ground for all and sundry to see. Among these are :

1. 58 Water-tanks	@	K.Shs.3,200.	each
2. 171 Water-jars	@	K.Shs. 800	each
3. 54 Improved Toilets	@	K.Shs.1,400	each
4. 40 Jerseys	@	K.Shs.5,000	each
5. 90 Farm Fertiliser Packages	@	K.Shs. 200	each

6. Subsurface Dams	@	N/A
7. 5 River Baraages	@	N/A
8. 1 Gravity Piped Water Scheme for 500 families	@	N/A.

These activities are completed now. On agenda re proposals for :-

1. Establishing more tree nurseries
2. Re-excavating colonial dams
3. Training Primary School Children on Ecology
4. Continuation of existing projects.

These activities which have been undertaken by the community WITHOUT FOOD FOR WORK - which many now see as the only avenue for getting community action - are impressive by any quantitative measure.

There of course are other outputs indicative of basic impact in the community.

Consider the fact that it was estimated that the well off families were using 60 litres of water in 1982 and now it is estimated that they are using 120 litres of better quality water.

Consider also that diarrhoea used to be the most endemic disease at health facilities and they do not report it now.

Consider further that basic new cropping patterns involving traditional crops, hybrids, vegetables, fodder, fertilizers and manure are now the norm rather than the exception. This is a revolution.

Consider also that the project organised famine relief before the cooperatives and government and there was no need for other outsiders to come into the area during the 1984 drought. As a result there was not speculation on grains as was found in less development oriented areas.

Consider the savings to the community simply because Utooni buys what must be sold and holds it in the community. They are self-sufficient in seed particularly beans which performed poorly in 1985 long rains.

Finally consider that crop storage and pest protection is now widely spread and the community has reverted to holding sufficient quantities of grain in store for at least two seasons so as to beat the cyclical local patterns.

All these are basic contributions to development which do not lend themselves to easy quantification.

We believe that the Utooni model is worth study and replication in other parts. It cannot obviously be replicated in its entirety. Those who have experience from Utooni could be creatively used by the DDC to deepen development work in the district for the model is powerful.

The Utooni model is based on a local leadership and followership which was seeking assistance to develop itself. Towards that end it sought assistance locally and internationally. It ensured that the priorities were not bend to suit some other external forces even when others saw in Utooni a media event. It is our hope that the leaders and followers will continue planning and executing this clear development of the people and for the people.

7. NGOs : The Development Policy Problem 'Arena'

To date there is not a national policy detailing what development roles NGOs are expected to play. Infact it was not until 1984 that a specific officer within the Ministry of Finance and Planning was assigned the responsibility of monitoring NGOs. It is doubtful whether one person looking over the activities of NGOs can make a dent in even inventorying their operations leave alone knowing how many there are and generating policy alternatives.

A recent consulting report considers that there are 400 in the country. The government itself is seeking to determine the "exact number of foreign non-government organisations" to quote the Minister of Finance and Planning, Prof. George Saitoti (Nation June 7th, 1985). He is further quoted as saying that the exact numbers are not known. Of the known ones, 70 were relief organisations, 60 educational and cultural, 39 welfare, 56 development, 15 foundations 10 volunteers. This information, given out in Parliament on 6th June 1985, suggests that there are in the country 250 foreign NGOs. This does not include religious organisations which, as is common knowledge, do a lot of development work.

If there is confusion at the national level about numbers and the development role of NGOs the same state exists at the district level. In Machakos until December 1984 there was not systematic information gathered on the numbers of NGOs operating in the District. Since then, the D.C. Machakos, has called a series of meetings for those NGOs registered as working in Machakos. From these meetings 15 NGOs were identifies as having a project Machakos in April 1984. However, as we discuss elsewhere, of those, only 9 had returned a questionnaire to the DC on their Machakos operations. Granted, these are the most important interms of ground coverage, but they mask the NGOs who actually finance the development. Some of them are simply conduits. For example CEBEMO funds significant projects through DOM. Thus an attempt to ask which NGO is operating at Machakos must be answered at several levels.

First it must be which NGO is actually running field projects directly in Machakos. Second, must be which NGOs fund others to run projects on their behalf in Machakos. A possible third category is which NGOs fund local activities on a one time basis through Harambee groups. Our limited budget and time does not allow us to finalise this issue but we think the administrative process should continue collecting data, in the three categories for future analysis.

After these basic questions are answered there is then the question of foreign versus local NGOs. In our questionnaire, we pressed for this information. We did not make headway for many of the foreign NGOs are increasingly operating through local NGOs and are therefore not registered at the District level. There is thus a conceptual problem whether a body operating with foreign funds should not be considered and registered as a foreign body. The clear policy problem here is whether GOK should not have procedures for knowing what resources are channelled to local bodies and for what development reason. We believe that all local NGOs should identify to the district sources of finance.

We are aware that this is the main fear of many NGOs. They see such detailed enquiry as the beginning of imposing government control. However if District Focus local planning priorities are to be followed we do not see any shortcut. Those NGOs operating in specific districts will have to identify what projects they are working on and where the funding is coming from. They will also have to reveal information on other resources, particularly personnel available to the districts for coordination and prioritization of development, available to the DDC, particularly its executive committee. This information should be routinely supplied and collected by the DEC and made available to all and sundry.

As NGO data on financing and personnel becomes available to DDCs through the DEC, there will be need to set guidelines on how much local (district specific) decision making is expected of particular NGOs. One NGO in the questionnaire return stated "it is not easy to give estimates here because the expenditure of each institution is done separately and is run from overseas".

How do these institutions fit into district development priorities ?. The immediate answer is that development by remote control is not development neither is it in the spirit of District Focus institution building.

NGOs will have to accept that their operations will have to fit into district development operations and therefore they need to reprogram their systems to facilitate this.

8. What Should NGOs Do in Machakos ?

NGOs tend at times to see their role as doing things which government ministries and local authorities are supposed to do.

Take the area of relief. During 1984, at the national level, there was extensive confusion between the NGOs definition of their relief work. As the drought deepened and Kenya Government activated its relief food program, many NGOs saw this as not only an encroachment on "their" area of operations but on "their" people. This issue raised a lot of heat in the NGO community particularly when the ruling was made that those NGOs who did not have food could not get it directly from the World Food Program or USAID. They had to go to the DCs to argue their shares and to be coordinated.

The 1984 drought was the first time when government operated a systematic national relief food program managed on daily basis and with clear planning inputs, yet the NGOs privately saw this as invasion of "their" arena.

To date many NGOs have rationalised their development programs on the basis that they can do it better than government. The reasons given are that they are more flexible in financing and operational procedures, they have shorter bureaucratic networks and can get to the people more rapidly with new and relevant information on development.

Whereas these reasons maybe technically right they sometimes lead to NGOs doing the same things as government and thereby denying society the innovative role which is expected of NGOs.

We believe that in Machakos there is a clear and present danger of NGOs getting into the trap of doing the same things as government. This is so particularly in agriculture where new food crop strains and their extension are seen as an important area of activity.

Our view of what NGOs should be doing in Machakos is that they should fill an important niches between individual households, the Harambee movement activities and governments activities.

Perhaps this stand point was put more clearly by DC Machakos when he told NGOs, "In my opinion, NGOs would serve us most usefully if they could pick up those projects for which there are no government funds particularly during the periods when we rollover the district development plan". This statement, the DC explained to us, further came out of analysis of sectorial development activities and realisation that there were many niches which would not attract government funds immediately.

Our standpoint suggests levels of operations. Clearly large development activities be they in water, afforestation or even education clearly lie in the government realm. Clearly also, the bulk of individual family production activities are in the arena of private action.

These can be linked by significant contributions by NGOs. In Machakos for example some NGOs are supporting children to go to school, others are supporting individual family watertanks. Yet others are supporting distribution of new food crops strains.

NGOs would be most effective, and possibly make the greatest contribution if their support went to individual household and community activities.

There is need for somebody to pioneer new methods to development and to fill small funding needs in those areas where government resources are stretched or currently unavailable.

In another section we have shown that few NGOs have identified the potential in the area of ON-FARM SUPPLIMENTARY IRRIGATION. In our discussions with many people in Machakos this has been identified as an area where there aren't ready sources of technical information, assistance and guidance inspite of the fact that wananchi and the DDC see it as a major way to attacking the continuous food shortage problem. Many NGOs now have mastered the new technologies for WATER HAVESTING AND STORAGE. Extension of this knowledge by NGOs in Machakos has concentrated on provision of water for humans and not very much thought has gone into how these new water technologies can be used for IMPROVING ON-FARM FOOD AND FODDER PRODUCTION.

In a district like Machakos where repeated droughts are the norm and where droughts do havoc to the resource base nothing should be of higher priority.

The DC Machakos assures us that the DDC has a priority need to CONSERVE AND USE WATER FOR PRODUCTION. Government activities are being oriented that way but given limited resources, clearly water for minor urban concentrations will take priority. That fact brings to force the urgency of NGOs supporting individual and community water collection and use in production. Obviously it would not make sense to get to water for irrigation if there was not water for basic human health.

We believe focusing on water for individual and community water system should be central for stemming out of it would be issues of IMPROVING LAND MANAGEMENT by introducing AGROFORESTRY and CURBING SOIL EROSION, and IMPROVING HEALTH.

These ought in turn to lead to improved production and income levels. At Utooni, the most clearcut community development initiative we know in the district, the handling of water needs (although they have not got to supplementary irrigation) has led to adoption of better land management.

This in turn has led to introduction of more complex cropping systems which utilise new strains of traditional crops like millets, sorghums, cowpeas etc. as well as the maize hybrids. It has similarly led to more complex agriculture utilising natural manure and artificial fertilisers and agro-chemicals and also more organised community action on other public goods like schools. The challenge therefore is not to design for communities new systems or even how they relate but to seed many activities and to allow the communities to solve the innovation equations themselves.

Projects which will explore new water conservation technology and its use in production are already a foot in many parts of the district. There are interesting community efforts organising them. A possible bottleneck would have been whether resource personnel with the requisite technical skills would be found. Here again the district has supplied an answer.

Machakos has very many retired people who double as community leaders or one type or other. The most unique are those who were extensively trained in water technologies as they existed in the 1950s. The DC Machakos is identifying these people and it is hoped they will form a technical pool which can be appended to the DEC and utilised as a COMMUNITY SOURCE of expertise in using water for production. Since these experts are found all over the district and furthermore since they are not employees of government, they ought to give NGOs the community contacts they need. This has been identified by NGOs a problem for not many of them know their way in the complex social networks of the rural areas.

Where NGOs go in through a single channel network like a church or an individual, they are held hostage in ways they do not even begin to know and identify as a cost to their program effectiveness.

We are aware that many NGOs by their mandates are limited to activities in specific sectors like health and education which do not easily lend themselves to our central recommendation above. For such NGOs we think there is a central role in linking their activities to community based groups which of necessity will need their services. But we must reiterate that in the view of those in charge of planning local development, a view we share, all these activities have to be anchored in using water for production. Only by so doing will the resource base fluctuations, caused by recurrent drought, and the attendant costs, be minimised. Such minimalisation would obviously give the society better bases (technical and social) for development. The Machakos people express this when they say they work only for drought.

If NGOs can accept the basic activity role of developing household and community water systems for supplementary agriculture, then logically they also ought to move into the STORAGE PROBLEMATIQUE. It is estimated that 35% of all national food production is wasted for lack of appropriate storage technology. No doubt a similar or higher figure exists for Machakos. Be that as it may be but it is popular knowledge that households sell their foodstuffs cheap (immediately after harvest) to also minimise their loss to pests and rodents. They buy dear near planting time when household stocks are very low. Grain traders or parastatals gain - not the mwananchi.

The traditional technology for grain storage was very sophisticated and is still remembered. It could keep grain for upwards of 10 years. However this technology is not within the cost reach of the majority of Machakos households for the insect and vermin resistant trees have gone with the ecological degradation.

Only the very rich can afford to build a KIINGA. However that should not discourage anybody. The new technologies of building galla watertanks are the same for building cost-effective grain storage systems. They have been tried in Yatta by Baptist Mission. They are within the cost reach of even the poorest. They are cost effective as the 1984 drought showed.

Those who had stored their grain were able to sell it as seed at between 3 - 10 times the market price. The reasons were that this was local seed and it was not infested.

We think that many NGOs should seriously take up the development of on-farm grain storage systems inspite of some economic disfavours. For many it will only be a question of applying the waterstorage technology to building cheap and durable grain silos. Prototype exist within the country. Grain drying systems need refining. We cannot agree with current economic policy arguments that on-farm storage will be more costly than regional or national storage systems.

Yet our concern is not just water and grain storage. FODDER STORAGE TECHNOLOGIES are rudimentary in Machakos. Since the society had never reached the land/demographic frontier, it never wrestled with this. However it is true that some farmers store crop wastes and feed them to livestock in periods of stress.

We should note that the issue is not just extension of crop waste feeding. It is much more basic. It is estimated that in the drier area of Machakos 60 - 80% of all vegetative growth is lost to white ants. This statistic ought to make all wonder how the district manages to even grow the livestock it does. Ant control is an urgent matter.

Techniques of making silage, hay and greenchop preparations are not generally familiar. Neither is the technology for growing new fodder crops/trees particularly those with nitrogen fixing properties widely known.

We believe that there is an urgent need for NGOs to get involved in fodder production, (including white ants control) storage and knowledge extension, as part and parcel of their development work in Machakos. Here perhaps a purely knowledge seeking and transmitting role, so well played by NGOs, can lead to immense benefits to the district.

We believe that all the NGOs who were involved in relief work in Machakos in 1984, and many others, can find roles in the above sectors. Their operations will have to be mainly targeted to individual households and community levels. However, we believe that some of the activities will have to involve the cooperative movement. In the past NGOs have not been particularly interested in operating through cooperatives. Machakos district has a very extensive cooperative movement which is primarily based on producer cooperatives. It functions, and well too, both at the primary society and the union level. For example, it was feeding EIGHT MONTHS BEFORE NGOs AND GOVERNMENT mobilised during the 1984 drought.

We would like to note that the cooperative movement represents a fantastic channel for implementing development. Some cooperatives are now into agroforestry. Others are beginning to struggle with the very complicated problem of financing their member's children education. Others are interested in new on-farm and community grain storage systems. All of them present fantastic opportunities for those NGOs operating in Machakos. They offer direct channels to families even at the remotest parts of the district.

Since many NGOs are not very familiar with how the coops work, it may be worth noting that the district agenda is debated at the district cooperative union level and once it is agreed, then the primary societies, who more often than not, come up with the substantive agenda through their union representatives, are mobilised for action. It is a two step flow system which is very efficient in discussing and implementing decisions once there is consensus.

The cooperative movement is looking for help in both individual farmstead and community/cooperative storage systems. Similarly they are looking for help in BASIC FOOD PROCESSING INDUSTRIES which caters to local

communities eg. HONEY PROCESSING, SISAL DECORTICATING, GRAINMILLING
APPROPRIATE TECHNOLOGY and REGIONAL (large scale drought community
food reserve) STORAGE SYSTEMS. These are areas where NGO minds can be
applied creatively.

Annexe a. MACHAKOS DISTRICT PROFILE.

Machakos district, one of the two Kamba districts, starts in the outskirts of the city of Nairobi to the east. It shares borders with the following districts : Taita, to the south, Kajiado to the south-west, Nairobi to the west, Kiambu and Muranga to the north-west, Embu, to the north and Kitui to the east.

Its south-eastern borders are in Tsavo Park and form the lowest altitude points in the district being less than 600 metres. The hill massifs in the northern parts range up to 2,100 metres.

In 1984 Machakos population was estimated at 1.5m by CBS. The district annual growth-rate matched the national figure of 4.1% in the CBS 1984 estimates. This population has in the past two decades been moving into the drier southern, western and northern parts of the districts where they settle on former state-lands and ranches.

The varied ecological and climatological range offers a diversified peasant production system with coffee and cotton being the main cash-crops. The main subsistence crops are maize and beans. Many farmers have ignored the traditional subsistence crops like pigeonpeas, cowpeas, millets and sorghum although they perform better than hybrid maize. Part of the policy thrust by the District Development Committee for future is making these crops central in peasant production.

In spite of the ecological and climatological range, water is a major problem in the district. There are only two permanent rivers - the Tana to the north-west only touches the district. The Athi which drains the bulk of the district though permanent, is formed by seasonal tributaries. On top of the hills are permanent streams. There is particularly bad fit of permanent water resource availability and demographics. As a result sub-surface waterflows in the sandy riverbeds are major sources for significant part of the population.

Developing the water resource for human and livestock consumption initially and later for on-farm supplementary production are seen as priorities by the District Development Committee.

Although there are scattered small mining operations in the south and south-west parts of the district, mineral resources, other than river-sand mineral offer little employment opportunities.

Annexe b. NGOS WITH FIELD PROJECTS. APRIL, 1985.

1. Action Aid,
Box 42814,
NAIROBI.
2. African Brotherhood Church,
Box 32,
MACHAKOS.
3. African Medical Research Foundation (AMREF),
Box 30125,
NAIROBI.
4. Australian Catholic Secretariat,
C/O. Catholic Diocese of Machakos,
Box 640,
MACHAKOS.
5. Care Kenya,
Box 43864,
NAIROBI.
6. Catholic Development Office,
Machakos Diocese,
Box 640,
MACHAKOS.
7. Catholic Relief Services,
Box 49675,
NAIROBI.

8. CEBEMO.,
C/O. Diocese of Machakos,
Box 640,
MACHAKOS.
9. Christian Churches Educational Association,
Box 1470,
MACHAKOS.
10. Christian Children's Fund,
Box 14038,
NAIROBI.
11. Church of the Province of Kenya,
Machakos Diocese,
Box 322,
MACHAKOS.
12. Development and Peace - Canada,
C/O. Catholic Diocese of Machakos,
Box 640,
MACHAKOS.
13. Food for the Hungry International,
Box 14978,
NAIROBI.
14. Institute of Cultural Affairs (ICA)
Box 21679,
NAIROBI.
15. International Council for Research in Agroforestry (ICRAF),
Box 30677,
NAIROBI.
16. Katangi Agricultural Project,
Box Katangi.

17. Kenya Energy Non-Governmental Organisations (KENGO),
Box 48197,
NAIROBI.
18. Kenya Freedom From Hunger,
Box 30762,
NAIROBI.
19. Kenya Medical Women's Association,
Box 49877,
NAIROBI.
20. Lutheran World Federation,
Box 40870,
NAIROBI.
21. Maendeleo ya Wanawake,
Box 44412,
NAIROBI.
22. Mazingira Institute,
Box 14550,
NAIROBI.
23. Mennonite Central Committee/Board,
Box 47596,
NAIROBI.
24. Miserior,
C/O. Diocese of Machakos,
Box 640,
MACHAKOS.
25. National Christian Council of Kenya (NCCK),
Box 45009,
NAIROBI.

26. National Council of Women of Kenya (NCWK),
Box 43741,
NAIROBI.
27. National Famine Relief Fund,
C/O. Chief Secretary's Office,
Box 30510,
NAIROBI.
28. NOVIB.,
C/O. Catholic Diocese of Machakos,
Box 640,
MACHAKOS.
29. Redeemed Gospel Church Inc.,
Box 505,
MACHAKOS.
30. Rotary Club of Nairobi South,
District 920,
Box 30751,
NAIROBI.
31. Salvation Army,
Box 40575,
NAIROBI.
32. Seventh Day Adventist Church E.A. Union,
Box 42276,
NAIROBI.
33. Sudan Interior Mission International (S.I.M. International)
Box 60875,
NAIROBI.
34. Technoserve,
Box 44263,
NAIROBI.

35. The Children's Mercy Fund,
Box 14065,
NAIROBI.
36. UNICEF.,
Box 44145,
NAIROBI.
37. World Neighbours,
Box 14728,
NAIROBI.
38. World Vision International,
Box 50816,
NAIROBI.

Annex CNon-governmental Organisation Profiles1. ACTION AID

Action Aid is an international NGO with a regional office in Nairobi. From the Nairobi Regional Office, Action Aid runs programmes in Kibwezi, Kangundo, Central and Kilome Divisions of Machakos.

Development Sectors:

In Kibwezi Division, the activities of Action Aid are concentrated in five major development sectors; school construction and furniture provision, feeding programme, 4-K clubs, women groups and a programme for the disabled.

Under the school construction and furniture provision programme, Action Aid has assisted a total of thirty two schools in Kibwezi Division, 6 schools in Kilome Division and one each in Kangundo and Central Divisions. Action Aid works directly with the community in the construction of administrative blocks, furniture, classrooms, latrines and kitchens. Apart from this material assistance, the organisation provides technical assistance where necessary.

The feeding programmes on the other hand entails provision of food for children sponsored by Action Aid. The parents however make their own cooking arrangements.

The 4-K clubs programme is agricultural oriented in nature. Action Aid assists one 4-K club in each of the the above mentioned schools. The project outputs comprise of agricultural inputs, agricultural instruction and training. Farm inputs, farm tools and demonstration inputs are provided to schools on an interest free loan basis.

The women Groups Programme is not yet fully developed. Currently, Action Aid assists ten women groups with materials and advice. Lastly, under the DAS programmes, 200 disabled cases are assisted and home visits and parents workshops are run.

2. SALVATION ARMY

The Salvation Army is a religious, charitable non-profit making organisation operating in all divisions of Machakos District.

Development sectors

The three major development sectors in which Salvation Army is engaged include local income generation, church development and a child survival project.

Under the income generation programme, the organisation operates through 4-K clubs and polytechnics with the aim of training youths in becoming self-reliant. To oversee the operation and running of 4-K clubs are three technical officers specialising in rural development. Their mode of operation calls for meetings with 4-K club members, and their parents at which meetings technical advice is rendered.

On the other hand, the Child Survival Project is the major project run by Salvation Army. The objectives of this project are geared towards reduction of child mortality through health education and improvement of nutritional habits in families through training local leaders.

The project covers twenty villages throughout Machakos district. The basic approach involves training (through sessions) community women to produce demonstrable changes in child health care parameters. The child survival project is aimed at benefitting the under five children. The basic method of working is training down to the grassroots level, through visual aids and other educational materials, health educators engage in

community health sessions and training trainers and leaders who in turn are expected to reach homes through health interventions. Under the health interventionist strategy, the following activities are undertaken:-

- training in Oral Rehydration Therapy
- provision and promotion of vaccines e.g. BCG, DPT, MEASLES - in conjunction with the Ministry of Health.
- breastfeeding and nutrition education in coordination with the Breastfeeding Information Group
- training women in growth monitoring
- family planning sessions
- antenatal and child health records

Basically, the child survival project operates through the use of Ministry of Health infrastructure. As yet another level, there exists a joint Government of Kenya-Salvation Army funding agreement whereby development of income generating activities if funds become available. Involvement of community in fund-raising may become a source of funds for this activity.

3. CATHOLIC RELIEF SERVICES

Catholic Relief Services (CRS) is an international NGO. The major aim is to support those community development projects which are initiated and developed at grass roots level. CRS normally operates short-term projects of three to nine months duration. Most of the agency's work in Kenya is concentrated among the marginal populations especially in Marsabit, Kitui, Machakos and Pokot Districts. In Machakos, its programmes are widely scattered. The basic approach employed is the use of food aid resources to support community development projects by distributing food commodities in return for work in activities that would benefit their communities.

Development Sectors

Under the Food for Work Program the following projects are undertaken and operated.

(a) Agricultural and Economic Development Projects.

These involve among other things constructions of wells, dams, ponds, drainage, reafforestation commodity storage facilities and soil conservation. Essentially, these projects are geared towards uplifting and boosting the agricultural and economic potential of the community.

(b) Community Development Projects: This category of projects involves road construction, renovation of school buildings, construction of recreation centres and a few such activities are aimed at serving the community.

(c) Educational Development Projects: The activities undertaken here include literacy classes, vocational training, nutrition and others which are educational-oriented.

(d) Health and Sanitation Projects.

The main thrust of the activities under these projects is to ensure and improve the health, sanitation and hygiene standards of communities. Among other activities are building of latrines and sewage disposal.

4. REDEEMED GOSPEL CHURCH INC.

Redeemed Gospel Church Inc. is basically a religious organisation whose major aim is to provide for the religious and other needs of communities.

The church has initiated development projects in various parts of Machakos District and in particular participates in famine relief programmes, seed distribution and distribution of farming equipment.

Development sectors

The major sectors in which the organisation is involved are four viz. famine relief programmes, seed distribution, distribution of farming equipment and family centred projects.

The famine relief programme basically involves provision and distribution of food commodities to the community as a stop gap measure especially during famine periods. The basic food items distributed are beans, yellow maize, powdered milk and fat. In addition the Church acts as a distribution centre for government relief to the community. The Seed Distribution Programme on the other hand is aimed at ensuring increased food production and self sufficiency in food supplies. The seeds distributed are greengrams, maize (katumani) and beans.

The farming equipment distribution programme is also geared towards enabling the community to be self supportive in agriculture and agricultural production. The approach used by the church is to organize women groups and provide them with agricultural equipment and materials such as seedlings, hoes, spades, wheelbarrows, pangas and sprayers.

Under the family centred projects, a total of 800 families have been helped and a number of poor children have been sponsored to schools.

To meet and fulfill all these operations, the Church operated on a 1984/85 Annual Budget of Kshs 340,772 most of which consisted of donations particularly from World Vision International and World Concern.

5. MAENDELEO YA WANAWAKE

Maendeleo ya Wanawake (MYW) is a local national non-governmental organisation with branches and operations in almost all districts in Kenya. MYW is purely a women's umbrella organisation, catering for women organised in women groups. The major aim of the organisation

is to improve and alleviate the conditions and status of women and their families. MYW is funded by various donors.

Development Sectors

The major activities undertaken by women groups and MYW are tree planting, maternal child health and family planning (MCH/FP), nutrition, conservation of energy and income generating activities.

In Machakos District, the maternal child health/family planning is a major activity. The MCH/FP programme is run by 11 employees to cover the whole of Machakos District.

For the MCH/FP programme, the fundamental approach is motivation, information and education on issues related to maternal child health and family planning. The main objective is to train local leaders to carry out the programme in their villages.

6. CARE KENYA

Care Kenya is a locally based branch affiliated to Care International. The regional office of Care Kenya is in Nairobi and sub-regional offices in some parts of Kenya.

In Machakos District, Care Kenya's main area of operation is Kibwezi. However, the agency's activities and operations are now slowly spreading to the entire district.

Development Sectors

Care Kenya operates four distinct main programmes viz water development, Primary School Education, Youth

polytechnics and Women Income Generation.

(i) Water development

The Water Development Programme is geared towards the construction of small and medium water systems through self-help programme. These water systems are based in rural areas and provide water for domestic use only. Apart from the small and medium water systems, roof catchment, dams and wells are constructed as well. A subsidiary but vital component attached to the water programme is a health programme - sanitation and other related activities.

In operating the water programme, Care Kenya works in close conjunction with Ministry of Water Development to train water project committees in operation and maintenance. Over the last three financial years, the status of the water programme was as follows:

In 1983/84, Care Kenya assisted four water projects in Kibwezi Division with pipes, fittings and materials worth Kshs 183,830/=. All these water projects are complete and operational serving 10,650 people.

In 1984/85, Care's water programme expanded to cover 10 new water projects (wells and dams). Care's assistance included the provision of handpumps, and tools worth over Kshs 33,000. All the water projects are in Kibwezi Division except for one in Makueni. Eight of the ten water projects are complete and operational and serve a population of 24,240 people.

In 1985/86 Care Kenya assisted 15 water projects with materials, pipes, tanks and fittings. The distribution of these water projects is ten (10) in Kibwezi Division, two (2) in Makueni Division and three (3) in Kilome Division. The beneficiaries include 5 primary schools and one secondary school. All the 15 water projects

cater for a population of approximately 21,000 people.

(ii) The Primary School Programme

Under the Primary School Programme, three major activities are undertaken by Care Kenya. First, assistance is given to parents in the form of roofing materials for classrooms and promotion of agriculture through 4-K clubs in schools. The second activity is the provision of educational literature - specifically an environmental magazine. Lastly, a Population Education Programme is run through school committees.

Over the 1983 - 1986 period, the primary school programme outputs are enumerated below.

In 1983/84, a total of five projects were undertaken. For all these five projects, assistance in the form of roofing materials for a total of 20 classrooms was given. All these projects are complete and benefit 780 pupils.

In 1984/85, 9 projects were completed. Roofing materials for a total of eleven classrooms was given and benefits 430 pupils.

In 1985/86, the number of projects increased to twenty. These involved assistance with roofing materials for a total of 25 classrooms to benefit 835 pupils.

(iii) Youth Polytechnic Programme

In this programme, Care provides tools and roofing materials for workshops. In addition, contracts are given to Youth Polytechnics to construct classrooms in Primary Schools and build roof catchment water tanks in primary schools.

Over the 1983/84 period, three projects were completed. The project inputs included tools, sewing machines, and building materials which benefitted 153 trainees and 3 instructors. All the three projects are complete and the tools and equipment are in use.

In 1984/85, only one project was undertaken with project inputs of materials for 68 trainees.

In 1985/86, 8 projects covering the provision of tools and materials for 511 trainees and 3 instructors are underway.

(iv) Women Income Generating Programme

The activities under this programme are geared towards improving the economic well being of women organised in groups through engagement in income generating activities. Since 1983, a total of 15 projects have been undertaken and are still operational. The project inputs include animals, medicines, pipes and water systems worth 189,500/= and benefitting 250 members.

For the whole of the Care programme for Machakos, a total of six technical personnel are employed. These include two water technicians, one water technician trainee, one veterinary technician, one social worker and one agriculturalist.

7. OXFAM

Oxfam is an international organisation with an East African field office based in Nairobi. Oxfam are not physically operational and thus have no field representative in Machakos. However, Oxfam's policy is to fund other groups in development work from the Nairobi Office. Oxfam's role is thereafter to make project visits to evaluate progress, examine funding requests and assist with technical advice where necessary.

We herebelow enumerate the projects funded by Oxfam in Machakos District.

- (i) Kibwezi Division Women's Group. This project was granted a grant of Kshs 10,000/= in 1983. The project's purpose and objective was to sell top bar beehives to women groups so that they in turn can generate

income through sales of honey and wax. With the grant, a total of 105 hives were bought and divided among group members.

- (ii) Drought Relief Programme: Through Machakos Diocese, Oxfam funded a drought relief programme worth Kshs 108,900/= in 1984. Under this programme the inputs were famine relief food and seeds to people in 26 parishes.
- (iii) Animal Husbandry Project: Oxfam funded this project in Ekarakara Catholic Mission worth Kshs 44,000/=. The grant was intended to cover operational costs for an animal husbandry worker to cover 3 villages through the provision of basic training to selected farmers (change agents)
- (iv) Utooni Development Project: (1983) This was a spring protection and water jar project worth Kshs 2,720. The grant rent for a trainer in plumbing and allowances to monitoring personnel in the use of springs.

In 1984, Utooni Development Project received an extra Kshs 15,000 for community health work training. The project entailed the training of four paramedical/ community health personnel who in turn would serve the community.
- (v) Amref Drought Relief Programme: An Oxfam grant of Kshs 40,000 was earmarked to cover Kibwezi and Kajiado. The programme covered supplementary feeding, food distribution, transport and setting up nutrition clinics.
- (iv) Ukambani Programme: Under this programme a grant of Kshs 668,000 was set aside by Oxfam to meet expenses on water catchment training, water tank materials, dam materials, accounts training and a revolving fund for 8 groups in Kitui and Machakos.

Lastly, Oxfam's future plans are to continue with the role of a funding agency to development partners especially those engaged in long term development projects, and emergency e.g. drought.

The other role is to catalyse small groups to be self reliant.

8. WORLD VISION INTERNATIONAL

World Vision International is an international religious organisation with its regional and country headquarters in Nairobi, Kenya. The organisation began its operations in Kenya in 1975. Initially, the organisation operated as a relief agency but has since diversified its operations to include development work.

Currently, the organisation operates through churches with a committee of church members and government officials with expertise in the fields of health, agriculture, education and water.

The major focus of the organisation's programmes is social welfare with particular emphasis on children and their respective families. Operationally, the community initiates a project with the guidance of World Vision and both parties participate in implementation.

The following projects have so far been funded by World Vision.

- (1) Kamuthanga Project: This project was started in 1979 in partnership with Salvation Army. The beneficiaries of the project are estimated at 800 families and their children. The project inputs consist of assisting beneficiaries in rearing goats, heifers, seeds, coffee trees, small scale businesses, school fees, tree nurseries and terracing. A total of Kshs 400,000 has so far been spent on the project.

- (2) Kawethei Project: This project is situated in Kangundo Location and is run in partnership with the Salvation Army. The activities undertaken under this project include the construction of three water dams, provision of bursaries for 150 students, purchase of water pipes, soil conservation, adult training and evangelism. A total of Kshs 352,000 has been spent on the project's activities. The future plans aim at expanding the scope of the project's activities to include water provision, food production and agricultural activities.
- (3) Tei Yumbuni Project: This project is situated in Kibwezi Division and is operated in partnership with the African Inland Church. The major areas of operation are education, relief food, food production and evangelism. World Vision has spent Kshs 560,000 on the above activities.
- (4) Myumbuni Project: The project is located in Mitaboni Location and is a joint venture with the African Inland Church. The project inputs are a polytechnic which is in operation, construction of water tanks and famine relief. Overall project costs are Kshs 553,600/=
- (5) Masinga Project: This is a joint venture with the Catholic Church .
Location: Masinga
Activities: - construction of 6 water dams
 - provision of seed and relief food
 - Provision of school uniforms and medical check-up to school children.
Budget - Kshs 1,096,000/=
- (6) Muthwani Project: A joint venture with Salvation Army.
Location : Mbiuni
Activities - Food production
 - Provision of fruit seedlings
 - Pit latrine construction
 - Terracing
Budget : Kshs 400,000

(7) Vulya Project: Run jointly with African Inland Church.

Location - Masii
 Activities - Vocational training
 Budget - Kshs 380,000

(8) Lumbwa Project: Run jointly with African Brotherhood Church.

Location - Kalama
 Activities - Youth Polytechnic
 - Uniforms and school fees
 Budget - Kshs 1,096,000

(9) Nzau Project: Run jointly with African Brotherhood Church

Location - Nzau Location
 Activities - Family Development
 - Water Development
 - Primary Health Care
 Budget - Kshs 400,000

(10) Kalawa Project:

Location - Kalawa
 Activities - Education, sponsorship and Adult Literacy Programme
 - Construction of 3 water dams
 - Agricultural training
 - Health
 Budget - Kshs 2,556,348

(11) Ngelani Project.

Location - Ngelani - Mitaboni Location
 Activities - Agricultural training
 - Provision of agricultural inputs
 - School fees sponsorship
 - Drilling wells (6)
 Budget - Kshs 2,141,700

In most areas where World Vision funded projects are located, the organisation's future plans are aimed at diversifying project activities.

9. INSTITUTE OF CULTURAL AFFAIRS

Institute of Cultural Affairs is a non-profit making non-governmental organisation with a regional office in Nairobi, Kenya.

Institute of Cultural Affairs (ICA) began its operations in Machakos in 1978. ICA is geared towards provision of training in development to local people.

In Kenya, ICA work has been initiated in 21 districts, including Machakos. The major fields of operation are Economic Development, Human Development and Social Development. Under economic development, economic and agricultural projects are undertaken, for instance demonstration farms, terracing and income generating activities. In the human development sector activities carried out include tree planting and nurseries, road repairs, construction of community facilities and others. In the field of social development, activities such as environmental sanitation, health care, educational and recreational facilities and activities are common.

The basic mode of operation followed by ICA is through meetings, courses, training and demonstrations.

ICA operates with a staff of 24 volunteers in Machakos District, 22 of whom are nationals and 2 expatriates. The main source of the organisation's financial resources are Ford Foundation, Swedish Cooperative Centre, USAID. It operated on a budget of Kshs 650,000/= in 1986.

10. TECHNOSERVE

Technoserve Inc. is an international, non-profit making and non-governmental organisation with a regional office in Kenya. Technoserve began its operations in Machakos in 1979. The organisation provides management

technical assistance and training to enterprises and institutions owned by low income people.

The organisation's basic tenet is that it is not the lack of capital that prevents successful development of small to medium size enterprises but good business concepts and sound management techniques adapted to the local environment. To offer these services, Technoserve responds to requests from prospective clients or sometimes the organisation approaches such clients.

The main focus of Technoserve is enterprise development so that such enterprises and institutions become self-sustaining and beneficial to low-income people.

Some of the projects where Technoserve's service has been rendered are enumerated below:

(1) Drumvale Farmers Cooperative Society Ltd. (1979)

The society requested Technoserve to provide a manager to design and install financial and livestock record keeping systems and also train employees on the operation of the ranch. The ranch is a 12,000 acre mixed livestock farm with 1,400 shareholders.

(2) Nguu Ranching Cooperative Society Ltd (1979)

The task of Technoserve in this ranch was to provide management as a prerequisite to acquiring capital from financial institutions.

After intervention by Technoserve, the society was able to acquire loans, physical infrastructures were installed, records and finances improved, share capital and turnover rose, assets went up and management was strengthened.

Business Advisory Services in Kenya (BASIK)

Apart from enterprise development, Technoserve operates a BASIK programme. Under this programme, Technoserve provides short-term management and technical

assistance to private voluntary organisations, local development institutions, church affiliated agencies and small scale businesses. In addition to this Technoserve operates pre-feasibility studies, accounting system analysis and design, organisational planning, inventory control and market research. In 1984, 64 projects in Kenya received assistance under this programme.

Community Enterprise Promotion and Investment Services.

Under this programme, Technoserve identifies business opportunities and implements enterprises with the objective of creating and establishing community based enterprises.

Technoserve's overall staff includes 4 expatriates and 11 local personnel.

11. CATHOLIC DIOCESE OF MACHAKOS

The Catholic Diocese's programme in Machakos District is run under the auspices of the Kenya Catholic Secretariat. A total of eleven projects are undertaken in Machakos District.

- Community Based Health Care programme
- Adult Literacy Programme
- Women Development Programme
- Religious, Formal Education and Awareness
- Small Homes for Physically Disabled Children
- Catholic Relief Services
- Family Life Education
- Agriculture
- Public Health and Medical
- Water Development
- Youth Programme

Community Based Health Care Programme

The objectives of this programme are:

- (1) to train more health workers

- (2) to employ more medical staff/community health workers at grassroots level
- (3) To create more awareness to new areas

This programme is run by five full time area coordinators who assist in the training of health workers, health helpers, make follow-ups, organize workshops, assist other programmes and attend barazas. The programme is also supported by the community.

The programme has so far realised some substantial results. In the field of training, 444 health helpers, 236 traditional birth attendants and 248 community health workers have been trained. There has also been an improvement in environmental sanitation health through digging of latrines and rubbish pits. The health of children has improved through vaccination against communicable diseases. Lastly, mothers have been trained in the use of rehydration fluid.

Adult Literacy Programme

This programme basically involves the training of adults and is ongoing throughout the whole district. Training has been undertaken in 203 groups with a total of 7,105 participants.

In addition to this, a number of projects have been completed viz poultry keeping, fruit and tree planting, soil conservation, small water projects, handcraft and savings schemes and home improvement.

Women Development Programme

The women development programme is carried out in the entire district. The activities under this programme have covered 757 women groups with a total of 30,280 participants. Among the projects completed are the following: 35 sewing centres, a bakery, a food store, soil conservation, fruit and tree planting, home improvement and bee keeping.

Religious, Formal Education and Awareness

Through religious education and awareness project, some training and staffing have been offered to 1,200 primary schools involving 2,800 teachers. The formal education project encompasses the whole district. The Catholic Diocese of Machakos has provided transport and staffing to this project. To date 61 secondary schools and 200 primary schools have benefitted from this project. The project inputs have been mainly water tanks, domestic science equipments and laboratory equipments.

Small Homes for Physically Disabled Children

The Catholic Diocese of Machakos has rendered assistance to the above project in some parts of the district. Buildings, furniture, staff and materials have been provided to building and water tank projects.

Catholic Relief Services

This project generally involves the provision of food relief supplies to supplement available food and food production. The organisation has assisted with staff and food supplies.

Family Life Education

The Catholic Diocese of Machakos has provided staff and transport towards this project. Project activities are ongoing in 9 locations so far and have involved 100 couples in natural family planning and other family life issues.

Agriculture

Agricultural development is carried out throughout the whole district. The project covers 250 groups with a total of 8,750 participants. Project activities cover cockrell exchange, sheep and goat project, soil conservation,

tree planting, foodcrop production and small water schemes.

The organisation has assisted with staff and materials.

Public Health and Medical

Public health activities include construction of pit latrines, bathrooms, rubbish pits and immunization. Medical activities are taking place in 7 dispensaries and one hospital. The Catholic Diocese of Machakos provides staff, materials, transport and medicines.

Water Development

There are a number of water development projects that are funded by the Catholic Diocese of Machakos in the whole district. Some 1,300 roof catchment tanks, 10 major piping schemes and some other small schemes have been constructed. The organisation on its part has assisted with a water engineer, a water animator, materials, training and workshops.

Youth Programme

Under this programme, seminars and meetings have been conducted to carpenters, young farmers and vegetable growers.

12. THE CHRISTIAN FOUNDATION OF KENYA

The Christian Foundation of Kenya is a religious charitable and non-governmental organisation. The organisation was formed in 1976 and registered in 1977.

The major aim of the Foundation is to cater for spiritual and socio-economic well-being of the less fortunate members of society through the provision of self-employment and self-reliance.

In Machakos the organisation has constructed a training centre which provides courses in masonry and carpentry, dressmaking and tailoring, mechanical engineering, electronics and electrical welding.

The Foundation particularly deals with people needing help in skills development.

Apart from the above project, the Foundation has proposed a CFK Rural Development Programme with a 2 year budget of Kshs 1,981,570. The project aims at exploring the potentials and promotion rural enterprises in Machakos District and improving the overall standard of living of rural people.

Delays in project implementation have been due to reluctance of local authorities in allocating a plot to the Foundation.

13. MALILA WELFARE ASSOCIATION

This is a voluntary and non-governmental local organisation. It aims at solving social problems especially poverty, disease and illiteracy.

The association relies on funding from donations, sponsorships, scholarships and emergency relief funds. The organisation works in coordination with other non-governmental organisations.

Annexe d. APPROPRIATE TECHNOLOGIES AND SOURCES

In this section we include some selected appropriate technologies and information on sources.

In keeping with our policy recommendations on the level of operations for NGOs, we have essentially narrowed down the available technologies to include those already tested and which are so cheap that they can be extended by primary groups with little cost.

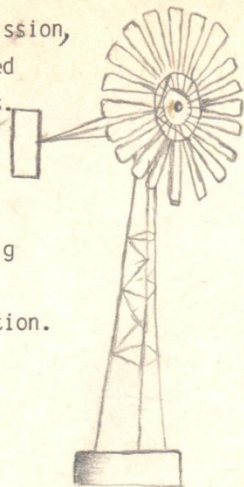
Most of the identified sources can be relied on to generate other information.

Since NGOs addresses are given elsewhere we just indicate those who have been involved in the technology extension.

1. WINDMILLS.

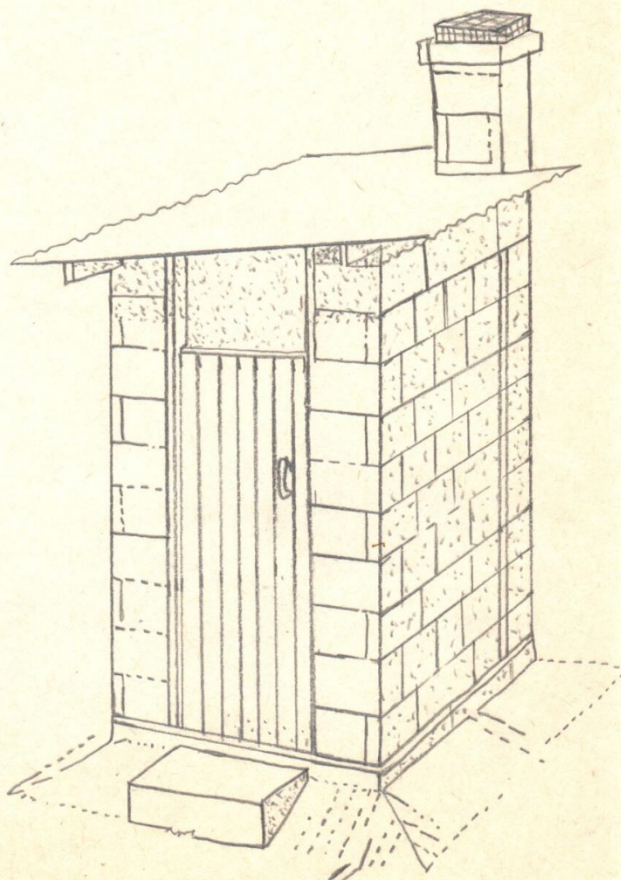
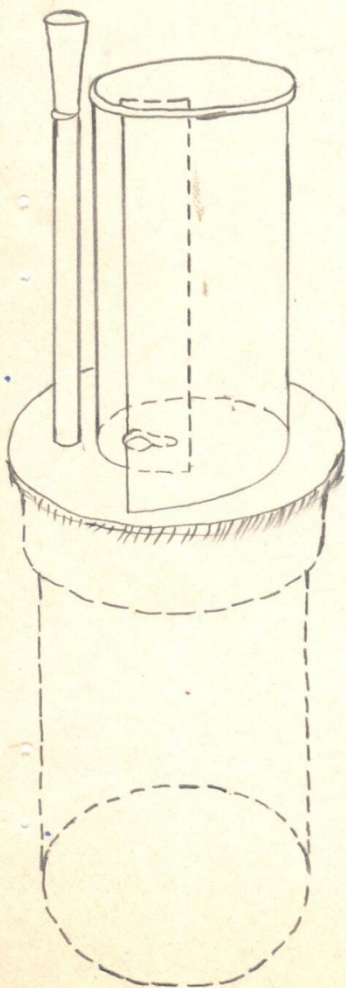
82

Other than Baptist Mission, few NGOs have extended windmills in Machakos. We believe they have a place both in human, and livestock water. There is a big future for them in supplementary irrigation.

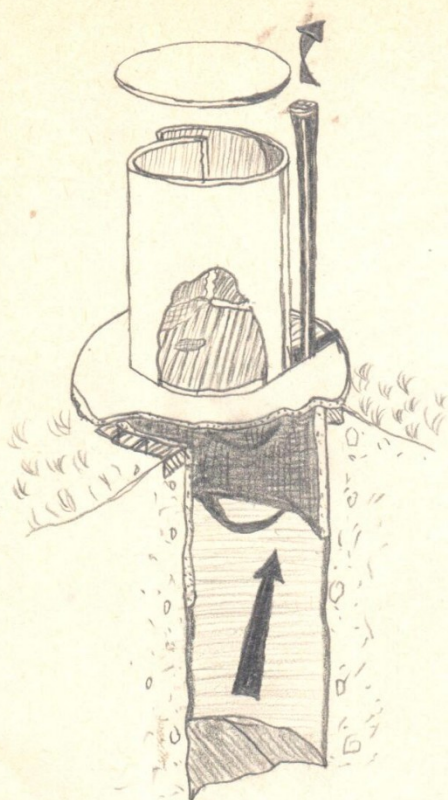


- Sources
1. Bobs Harries Engineering Ltd.
Box 40, Thika.
Phones : 47234/47250.
 2. Appropriate Technology
Advisory Committee (ATAC)
Box 61221, Nairobi.
Phones : 553859/553475.
 3. Salvation Army Variety
Village,
Box 1472, Thika.
Phone : 21822.
 4. Unicef.

2. IMPROVED PIT LATRINES.



Construction Stages.

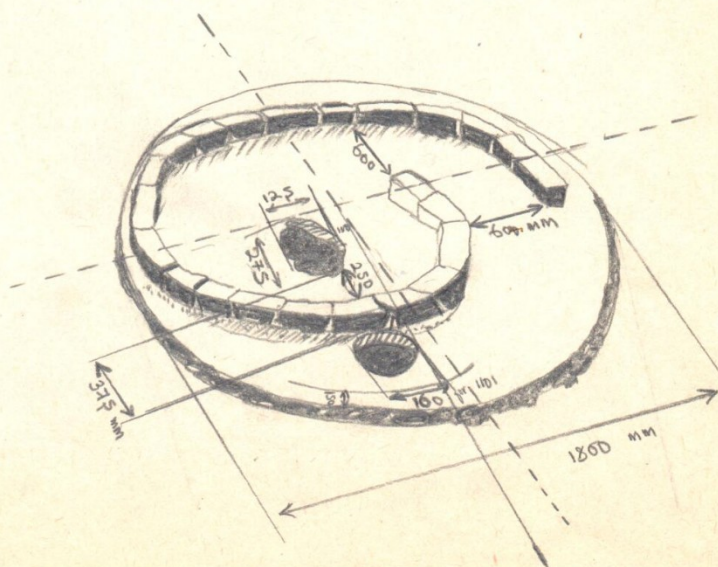


Improved pit Latrines with flytraps have been shown to be significant contributors to health. They can be used also as sources of fertiliser (an idea worth initiating for fertiliser shortage in Machakos is increasingly a problem).

Human waste is a major health problem in the district and current disposal systems are highly inefficient. They make no contribution to the fertiliser equation.

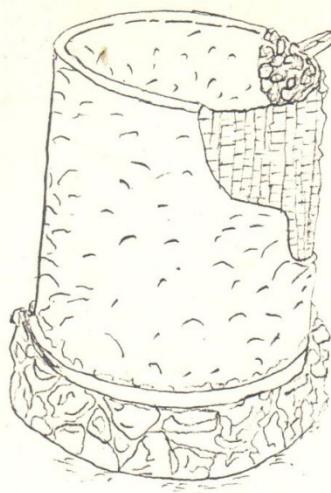
- Sources :
1. Unicef.
 2. World Neighbours.
 3. Baptist Mission.

Layout.



3. ON-FARM GRAIN SILOS/ IINGA.

The same structures can be built to replace the traditional grain silos (iinga plural - kiinga - singular) but the walls need not be as strong as for water. The bottom drain pipe for seeds would have to be bigger than shown for water.

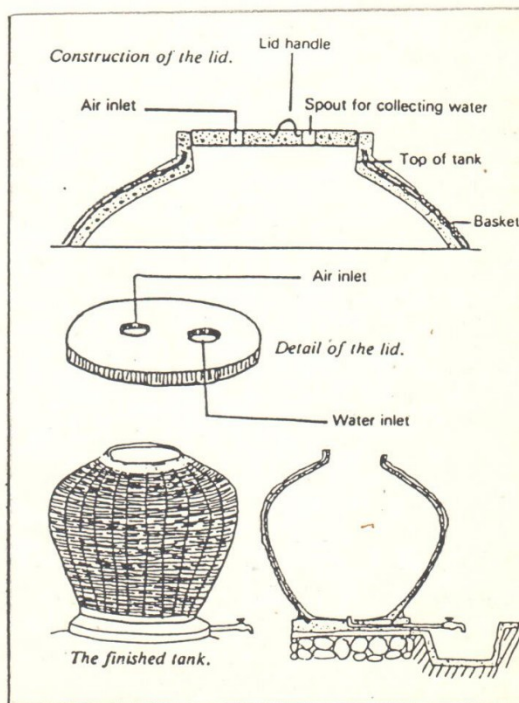


WATER JARS.

Water jars/tanks are most critical for rainwater harvesting where houses are roofed with permanent materials. There is a major demand for them. Their construction would be beneficial interms of health and releasing labour.

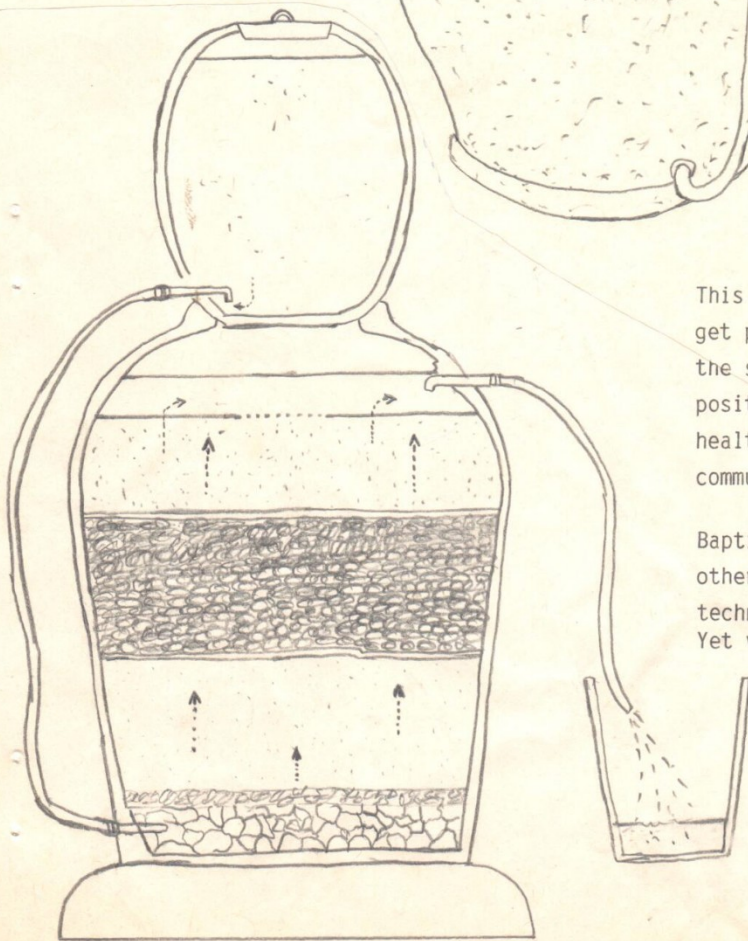
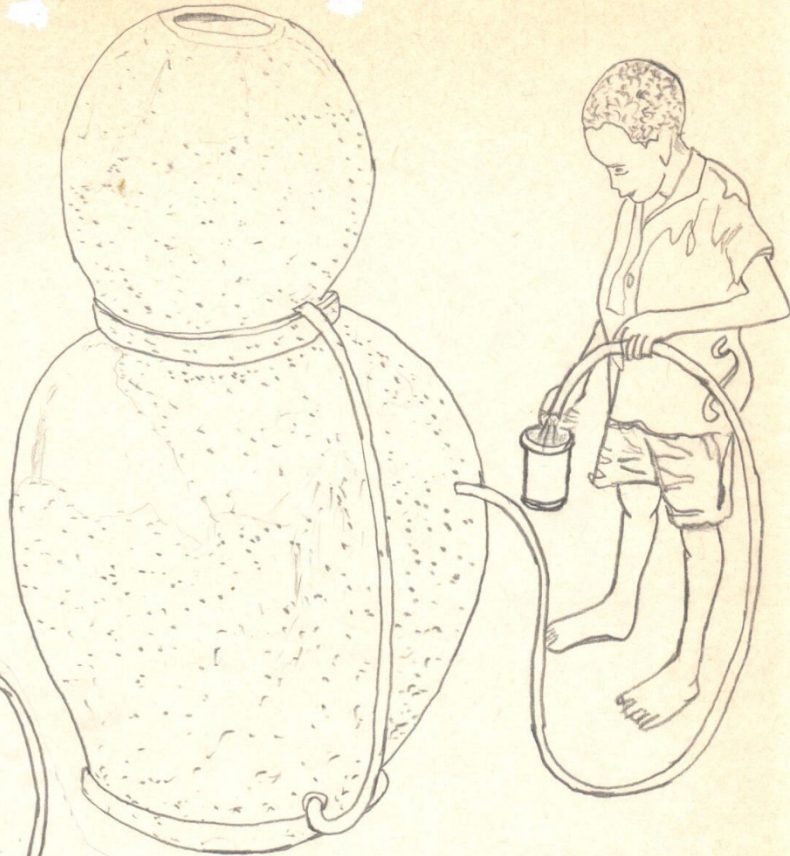
There is need for NGOs and others to experiment with different construction techniques for the silos since to date only Baptist Mission has built some in Yatta. More information on moisture management before storing and during needs further checking particularly if silos are to be extended to the wetter hill areas.

- Sources :
1. UNICEF.
 2. Baptist Mission.
 3. NCK.
 4. Catholic Development Office.
 5. World Neighbours.



4. UPWARD FLOW WATER FILTER.

Extensive testing
by UNICEF has
shown that impure
or contaminated
water is
filtered
completely
including
bacteria and
other microbes
in this system.



This system allows households to
get pure drinking water whatever
the source. It should have very
positive contribution to the
health of households and
communities if extensively adopted.

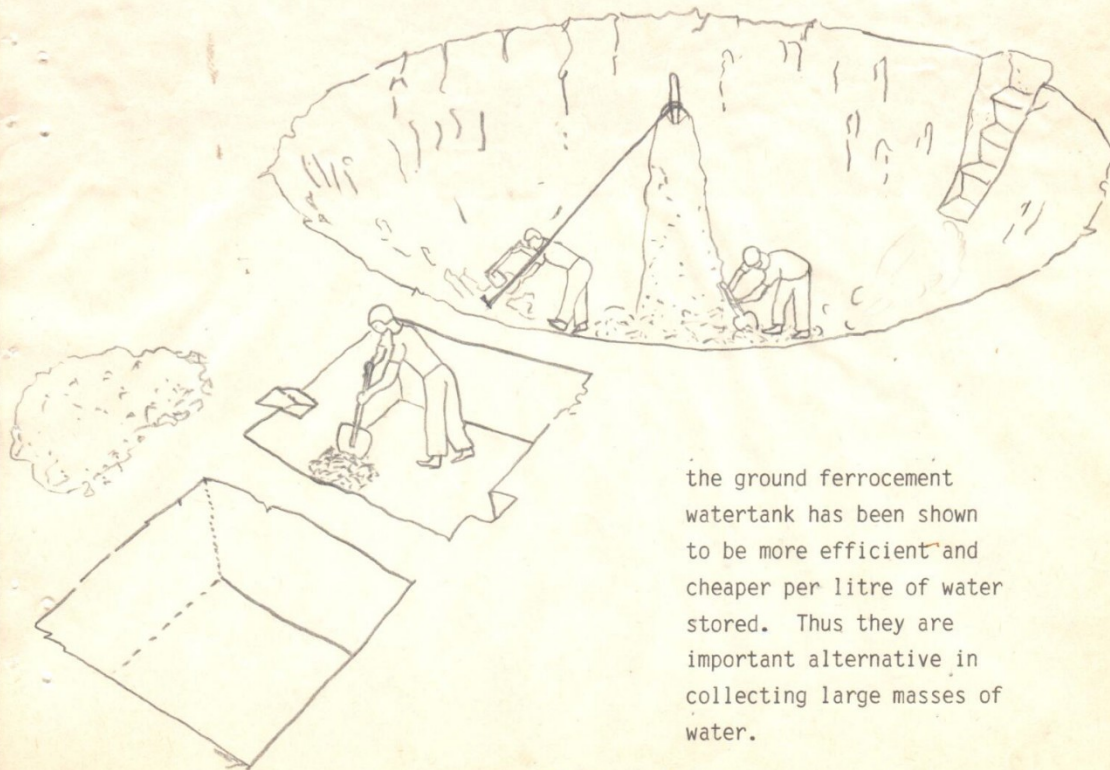
Baptist Mission, NCCK, UNICEF and
other NGOs have extended this
technology in Machakos for a time.
Yet very few households have the
filters.

- Sources:
1. UNICEF.
 2. NCCK.
 3. Salvation Army.
 4. Baptist Mission.
 5. World
Neighbours.
 6. Catholic
Development
Office.

5. GROUND FERROCEMENT WATER TANK.



As opposed to free
standing roof-catchment
water jars/tanks which
need extensive strengthening,

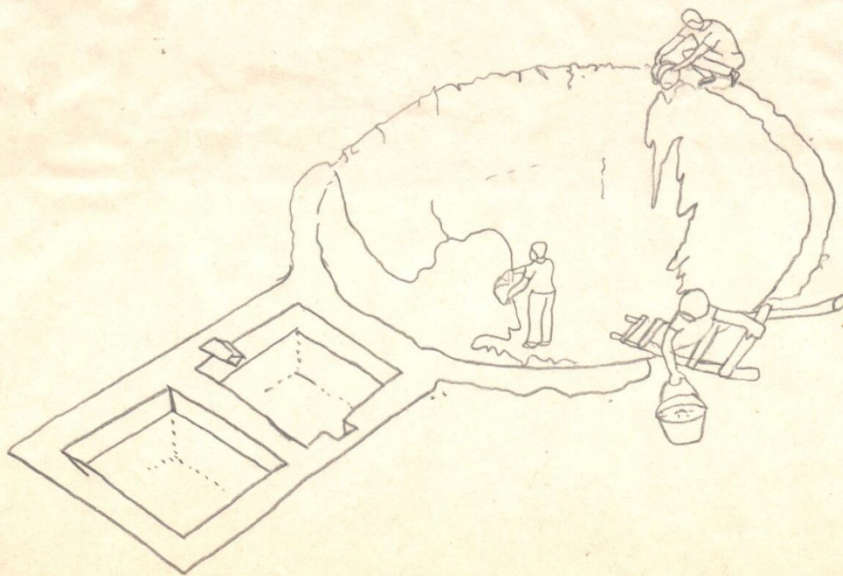


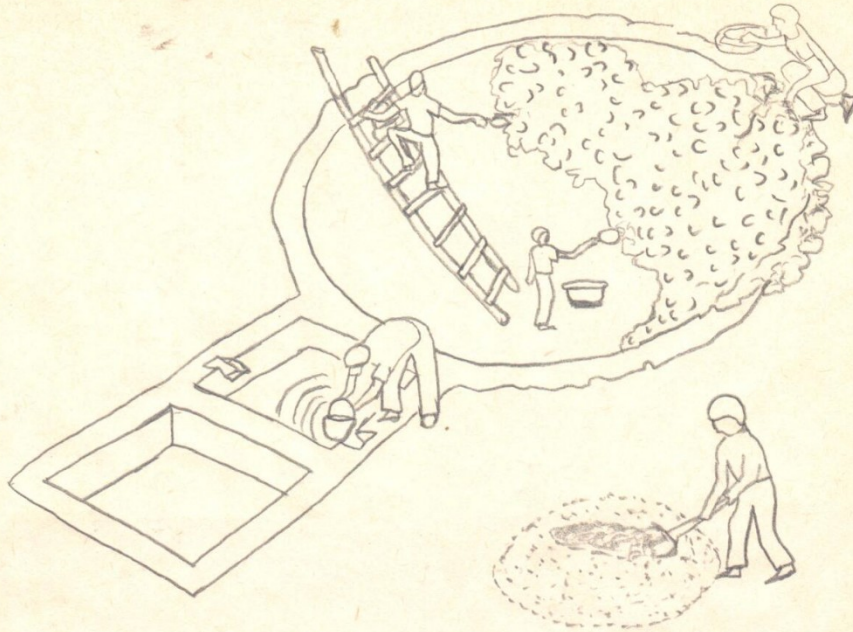
the ground ferrocement
watertank has been shown
to be more efficient and
cheaper per litre of water
stored. Thus they are
important alternative in
collecting large masses of
water.



Usually they are constructed to collect water runoff in the house compound hence their other name compound-tanks. The logic then is that the water is in proximity of the home.

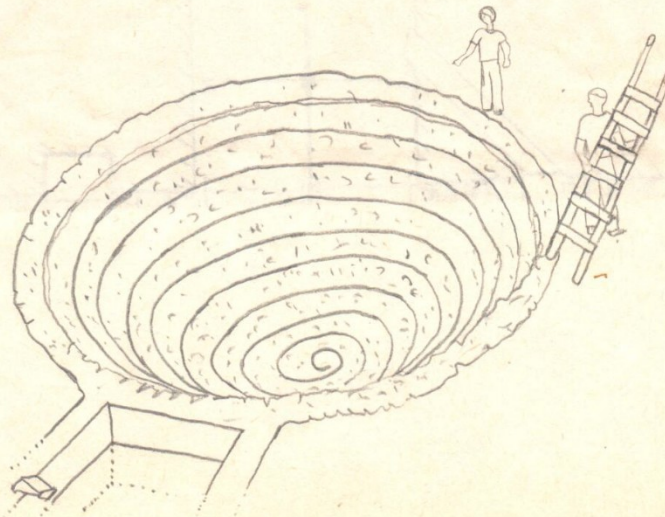
UNICEF has built many of these in schools at Yatta. Baptist Mission has built many for households in Yatta also.

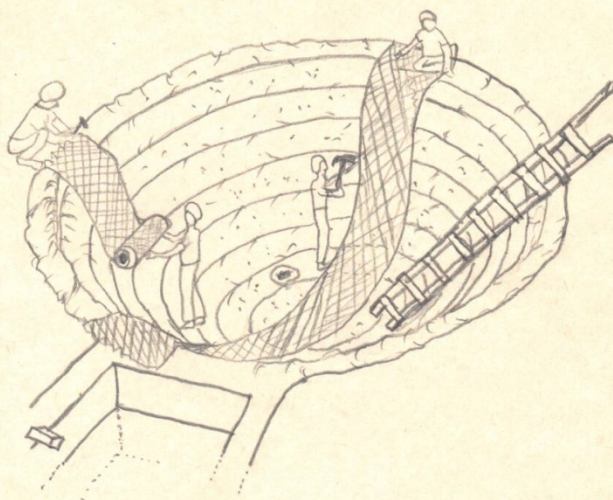




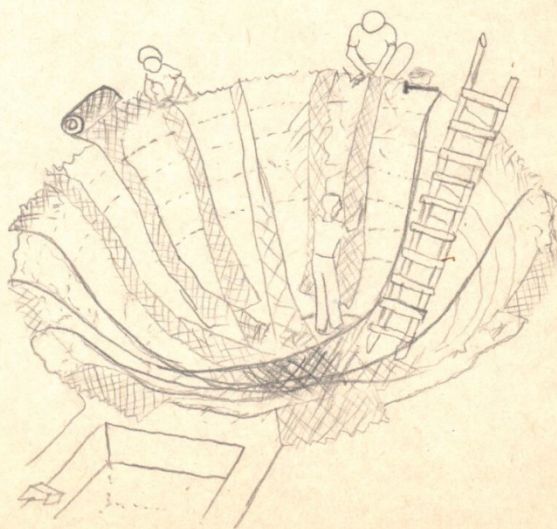
There is an extensive DANIDA project
of them in Mutomo Division, Kitui.

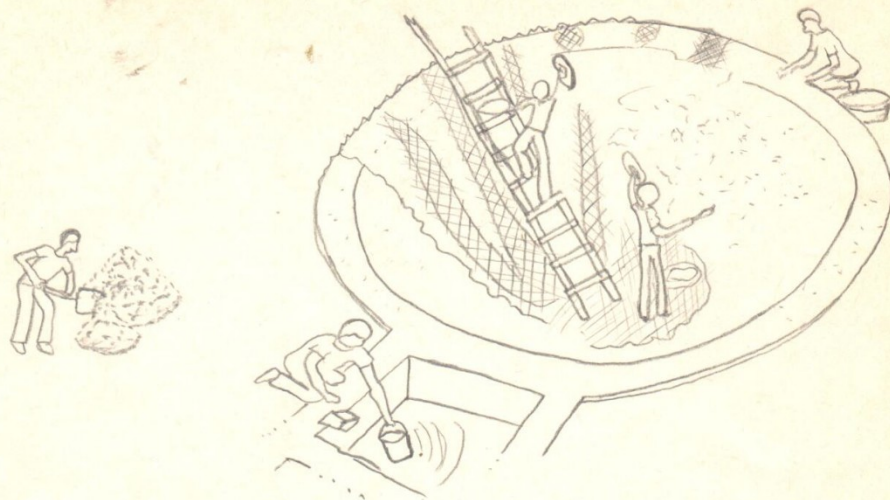
We believe that this type of tank
would be extremely important in any





development of supplementary irrigation as well as control of road runoff which is leading to extensive gully erosion in the district. Since this type of tank can be built in very large sizes we recommend that the DDC by using Rural Development Funds,

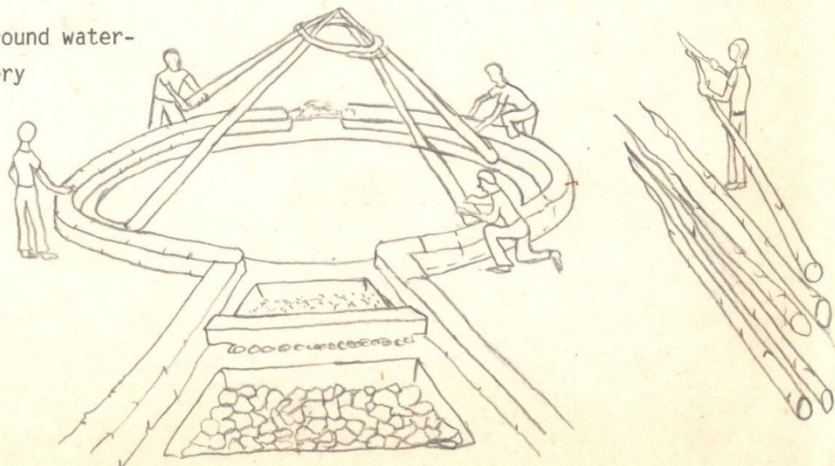




and other sources investigate their development in large scale for runoff for supplementary irrigation and management of road runoff particularly on the major roads. The advantage of such a program would be to introduce into the district a technique of managing road runoff which has led to very costly construction and at times reconstruction of roads.

This type of watertank can be built in series to assure community water supplies. This to our knowledge has not been done in Machakos. We urge the DDC and NGOs to investigate their use particularly in those areas where there aren't good sand rivers to construct the cheaper sand-river dams (usually called Koo in Machakos since ALDEV days).

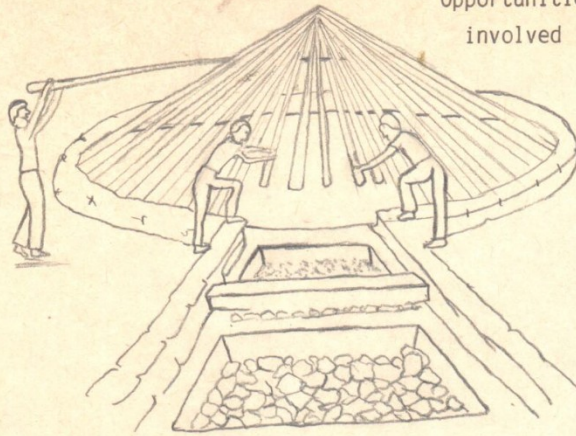
Construction of ground water-tanks should be very important for individual households who want large volumes of water for supplementary irrigation.



Many groups which have rehabilitated their gullies and/or sand-rivers to get common water sources are talking of on-farm water for supplementary production.

Opportunities therefore exist for NGOs to get involved in extending this tank technology

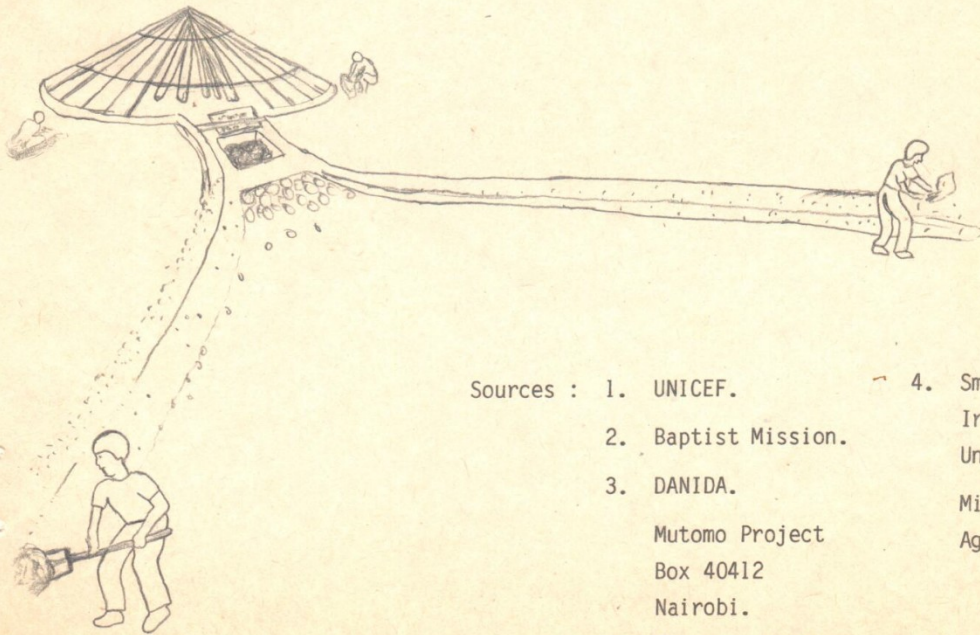
particularly for groups which can organise so that the construction is done by the community.



We believe that other than the technology of creating dams in sand-rivers which was pioneered in Machakos in the ALDEV days and which is limited by availability of good natural sites with stones crossing

the river channel to form a good foundation and distance from households, this technology is promising in thinking about large amounts of water for supplementary production. It is not widely known in the district. It has not been experimented on to still bring the costs down as we believe is possible.

On the technical side there is need to investigate other reinforcing techniques. We believe costs can be brought further down given different soils as experimentation with reinforcing continues.



Sources : 1. UNICEF.

2. Baptist Mission.

3. DANIDA.

Mutomo Project

Box 40412

Nairobi.

Phones : 60384.

4. Small Scale
Irrigation
Unit

Ministry of
Agriculture.

6. WOOD STOVES . Wood-fuel is chronically short in upland Machakos. If the dry areas are to be kept from total desertification there must be immediate programs for reducing wood-fuel consumption. The cheapest and socio-culturally fastest way to do this is to introduce highly efficient wood-stoves.



The UNICEF designed Rafiki model seems to be the most appropriate.

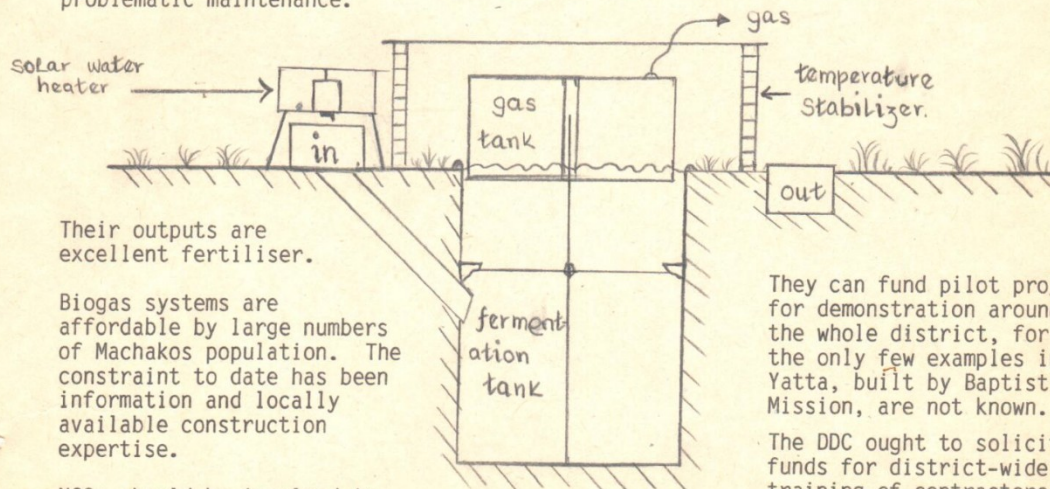
In our opinion this task is so urgent we urge the DDC to use RDF and other funds, to mobilise Social Services for its extension and to solicit large scale NGO activity into the stoves activity.

- Sources
1. UNICEF.
 2. NCCK.
 3. Baptist Mission
 4. Kenya Energy Non-governmental Organisations Association (KENGO) Box 48197 Nairobi - Phone 749747.
 5. CARE.

7. BIOGAS SYSTEMS.

Biogas systems not only

limit wood-fuel consumption but also offer opportunities to upward mobile households who demand light, refrigeration and hot water. These are important variables in improving the standard of living. Beyond that, biogas can be used in water-pumping. Even after initial capitalisation biogas systems are extremely cheap and do not have problematic maintenance.



Biogas systems are affordable by large numbers of Machakos population. The constraint to date has been information and locally available construction expertise.

NGOs should be involved in the knowledge extension as well as in training construction people who can then fill the demand on commercial basis.

They can fund pilot projects for demonstration around the whole district, for the only few examples in Yatta, built by Baptist Mission, are not known.

The DDC ought to solicit funds for district-wide training of contractors and demonstration construction.

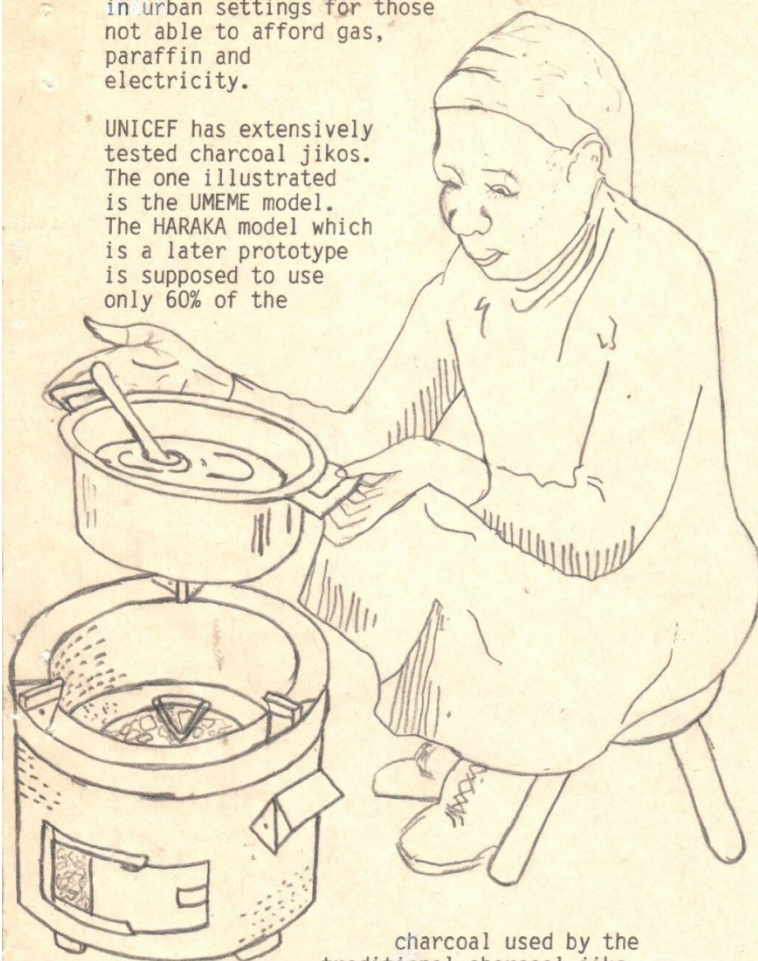
- Sources :
1. UNICEF
 2. Baptist Mission.
 3. Danida - Mutomo Project.
 4. NCCK.
 5. KENGO.
 6. CARE.

8. IMPROVED CHARCOAL STOVES.

On principle consumption of charcoal should be discouraged particularly for rural households given the potential for desertification.

However there is a niche for improved charcoal jikos in urban settings for those not able to afford gas, paraffin and electricity.

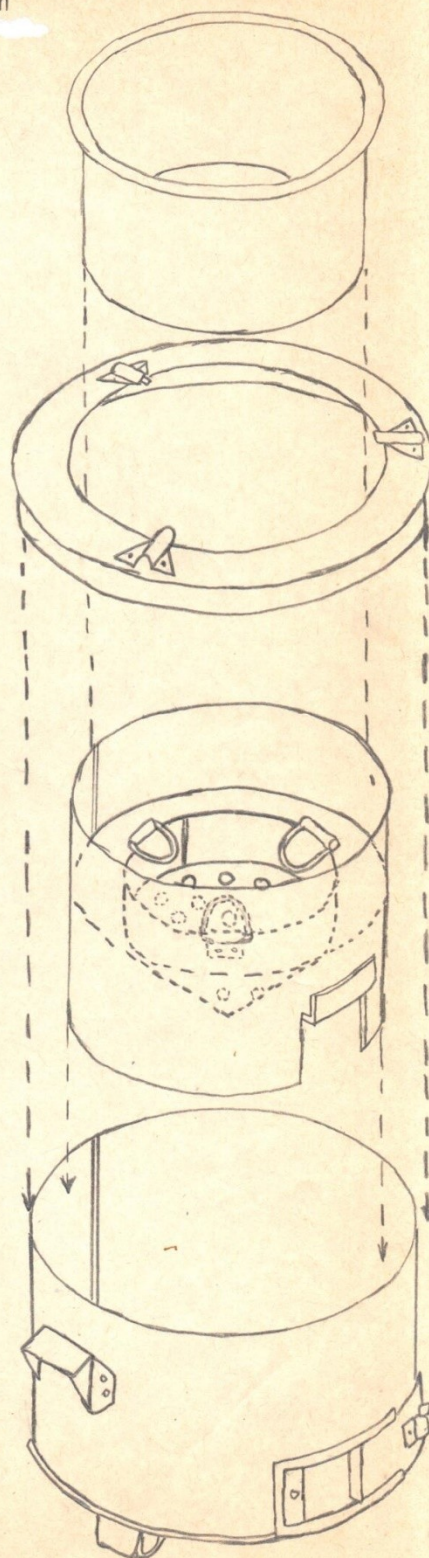
UNICEF has extensively tested charcoal jikos. The one illustrated is the UMEME model. The HARAKA model which is a later prototype is supposed to use only 60% of the



charcoal used by the traditional charcoal jiko.

It seems to us that there are good opportunities for NGOs to extend this knowledge. Perhaps the strategy is to use the construction of the jikos in starting income generating activities for groups within the urban environs.

- Sources :
1. UNICEF.
 2. Salvation Army.
 3. NCK.
 4. KENGO.
 5. CARE.



9. TRADITIONAL TREES IN AGRO-FORESTRY.

Not very much attention has been paid to traditional trees as sources of fodder, extract, wood and construction poles. In spite of much research on imported trees little is done on improving traditional trees, finding market for their produce and integrating them into crop farming.

Some interesting inventory work has been done by KENGO and Mennonite Central Committee/Board. Much remains to be done.

We see priorities in 1) Improvement of species 2) Investigation of utilisation of tree produce 3) Integration of tree farming into crop farming. Of particular importance will be the trees which are NITROGEN FIXING. Current work suggests that significant numbers of traditional trees fall into this category. What remains is extension of this information. The DDC should think of encouraging work in this area.

- Sources :
1. KENGO.
 2. MCC/Board.
 3. Mazingira Institute.
 4. UNEP.
 5. International Council for Research in Agro-forestry (ICRAF)
Box 30677
Nairobi
Phone : 29867.
 6. CARE.

10. IMPORTED COMMERCIAL TREES.

Trees from other countries offer significant potential for Machakos farmers. Some are nuts not only with wide international markets (e.g. jôjoba, yeheb, etc) but also nutritional value. No work is being done on their breeding and extension. Other trees are important for fodder. Others are good for fuel.

The DDC should go out of its way to attract some specialists from NGOs to make available resource people to try extending these into smallholder production systems. Emphasis should always be on those trees which fix nitrogen, offer some fodder, and also some nutrition for such a combination would give peasant producers fantastic advantages.

Sources :

1. KENGO.
2. MCC/Board.
3. ICRAF.
4. Mazingira.
5. UNEP.

11. TRADITIONAL FOOD CROPS EXTENSION

Significant numbers in Machakos do not farm traditional crops. We have in mind the millets, sorghum, cowpeas, pigeon peas, nzavi, cassava and sweet potatoes.

Better strains of the above crops are not easily available for the formal research institutes have not developed the new strains within the parameters of the peasant farm production system.

Where new strains are available they are packaged in quantities not easily utilizable by the peasant smallholder.

We believe there is room in existing Machakos farming systems to allow local growing of improved strains. What is lacking is investment into packaging these in small quantities within the reach of the ordinary farmer.

Extension of seed selection on farm is an area crying out for funding.

There are many possible institutional arrangements. We believe the cooperatives should take initiatives in contracting farmers to grow seed for the local market, to package it into small quantities and to distribute it in their extensive network. They will need help in planning this. Perhaps NGOs can help in this.

We understand UNICEF has initiated a seed distribution program. Its experience should be drawn from.

Sources : 1. UNICEF.
2. CARE.
3. Action Aid,
Box 42814, Nairobi.
Phones : 62761/62956.

12. GRASS-LAND IMPROVEMENT.

Not much work has been done on the management of natural grass leys in Machakos. Particularly little has been done on legumes for improving the sward.

Little is done on controlling white ants. Nothing significant has been done on appropriate technology for opening up the hard pan in grazing-land before the rains to increase percolation and grass/legume growth.

In Australia some grasses from Kenya have been bred for as dry areas as Machakos.

There are traditional legumes which are good feed. There are tined tools for improving grass-land.

We believe this is an area where many NGOs can make a contribution. It is not enough to cry about overgrazing. Perhaps it partly comes about since little improvement and management of sward takes place. Since the problems enumerated were not dealt with traditionally it seems to us that NGOs will have to package this knowledge and extend it.

- Sources :
1. Technoserve
Box 44263
Nairobi.
Phones : 743628/9.
 2. Australian High Commission,
Development Assistance Office,
Box 30360, Nairobi.
Phone : 334666/72.

13. NEW FODDER CROPS.

Banner grass has been shown to be a major crop under relatively high rainfall regime. It is not extended extensively in Machakos.

Leucaena (varieties peru and cunningham) has been tried in very limited areas in Machakos.

Casuarina (cunninghamiana) is hardly tried.

Gliricidia sepium has to the best of our knowledge not even been tried. These and other fodder crops need to be plugged into the farm production systems. Extension work and spot specific performances can be organized by NGOs.

- Sources :
1. KENGO.
 2. MCC/Board.
 3. Mazingira.

14. LIVESTOCK BREEDS IMPROVEMENT.

The bulk of Machakos cattle, shoats and chickens are traditional breeds inspite of the efforts since 1950s to convert to better performing breeds.

The early breeding improvements in livestock were based on sahiwal bulls. Later there were attempts to use A.I. which have not been extensive. Semen has essentially been from Guernseys, Jerseys and Friesians. Surprisingly the improved Boran, Sahiwal and Australian Milking Zebu have been totally ignored. This can only be explained by the schizoid planning which categorises livestock production into milk producers and beef producers and fixes extension to specific ecological zones.

Machakos farmers on their own have ignored this and have introduced other breeds like charolais , improved Boran Friesian Crosses. More significantly a few farmers have worked out ways of keeping the exotic animals in areas where according to all experts they should not be surviving. Witness the Friesians in Wamunyu and Yatta.

Many NGOs have got into extending new goat breeds. Yet most are either European milk or meat pure lines which do not easily survive given the peculiar local diseases and management systems.

There aren't significant programs for improving sheep.

A few NGOs are participating in the improved cockrel exchanges - essentially extending a government program.

To speed up the innovations on the ground interms of meat production on those animals familiar to Machakos peasant producers we suggest that NGOs get involved with cattle, sheep and goats and chickens.

On cattle there is need to fuzz the milk versus beef dichotomy. Thus dual purpose animals in all areas are called for.

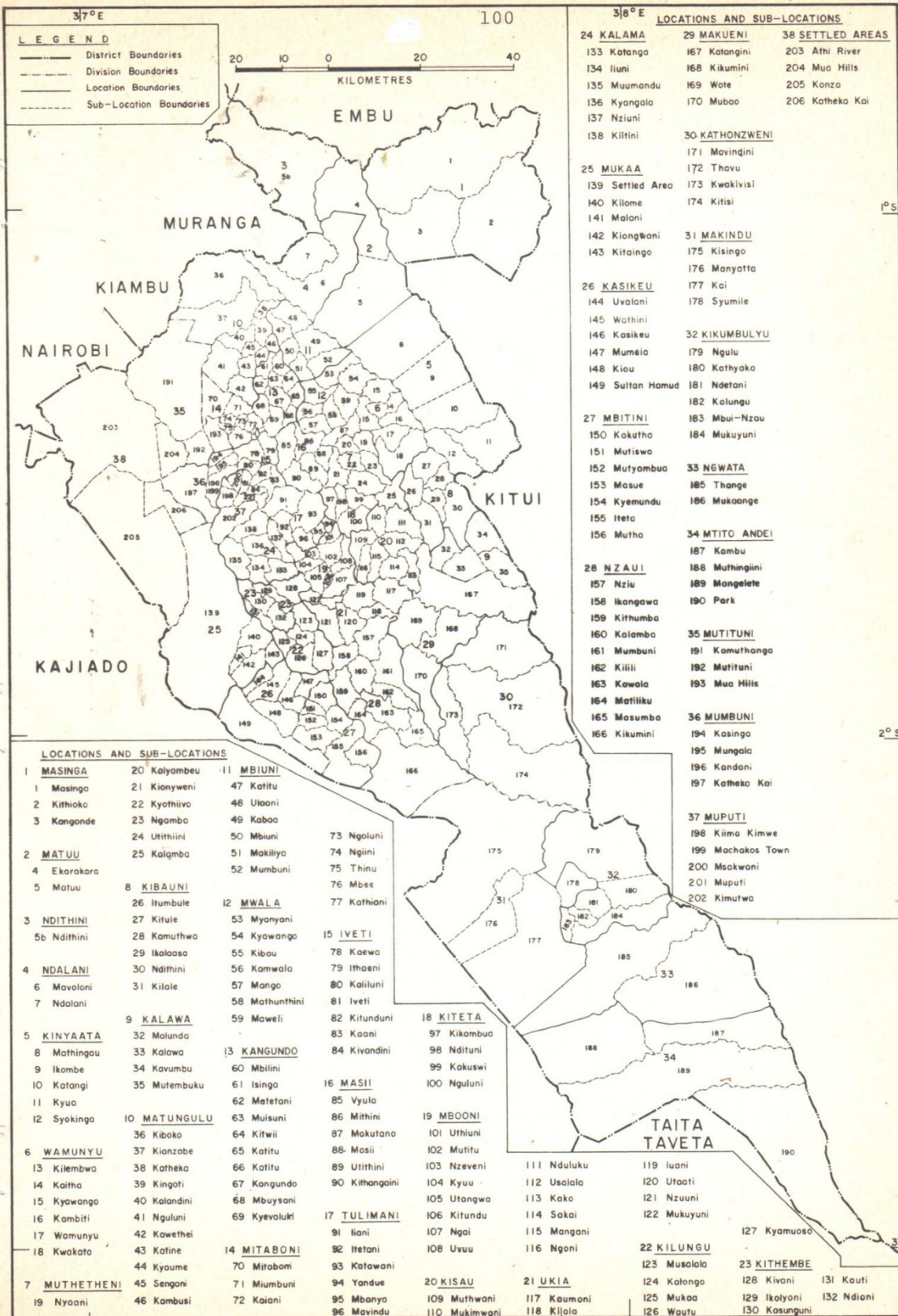
The Improved Borans, Improved Boran - Friesian/Sahiwal Crosses, and Australian Milking Zebu need extension. It can be by bulls or A.I. as power for refrigeration is now available in many parts. The strategy should be to improve local cattle so as to maintain disease resistance. This ofcourse must be done parallel to improved disease management as well as feeding.

Goat improvement is still problematic. To cross local breeds extensively with the galla goat and other local crosses maybe a worthwhile strategy and is not costly. This can be followed by exotic crosses later.

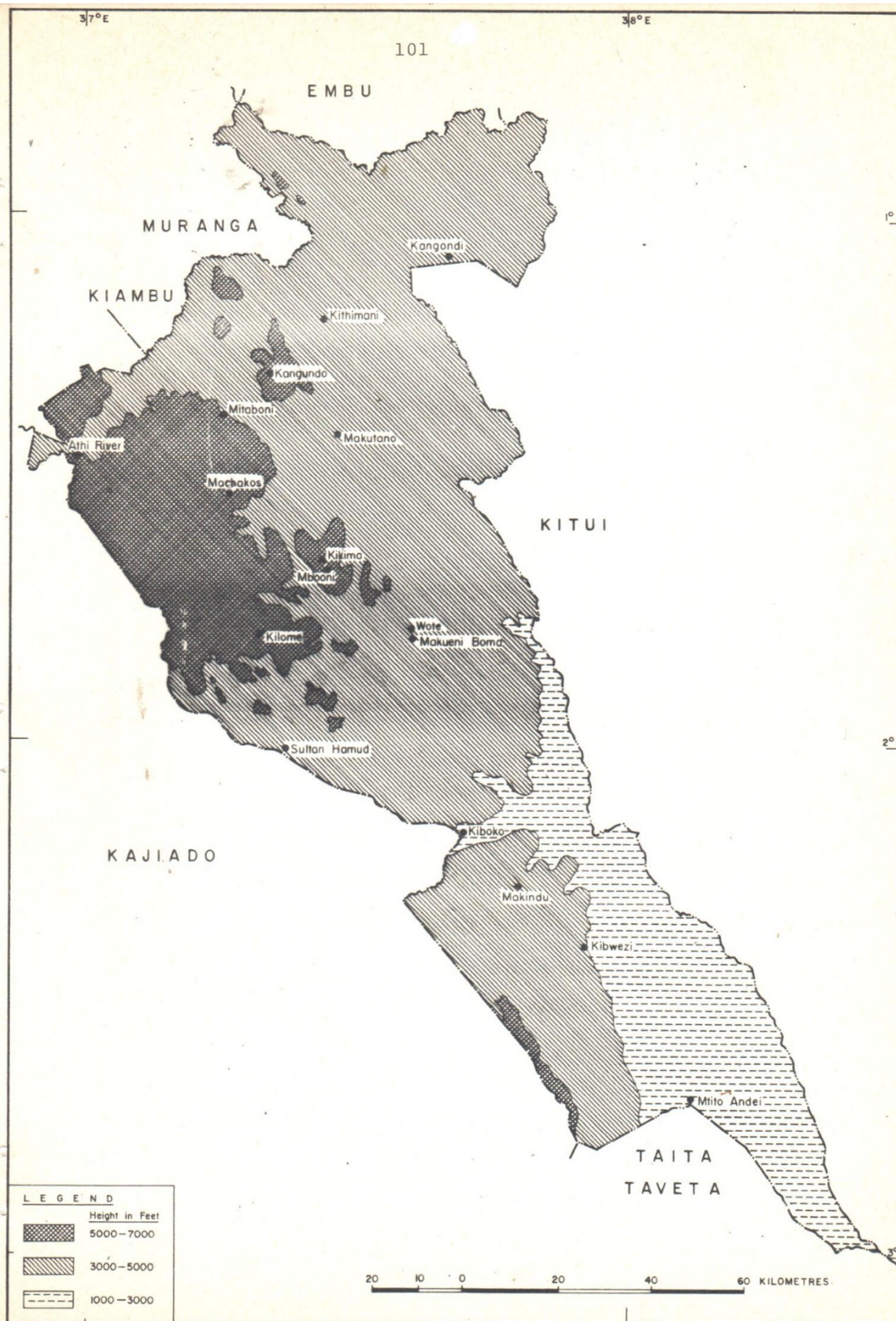
Improving sheep breeds by perhaps with Somali, Galla and Maasai crosses should be the initial strategy as there aren't enough of the locally adapted exotics to pass around for a breeding program.

Those chicken improvement projects which rely on improved cockrels should not only get expanded but more material should be injected into the genetic pool.

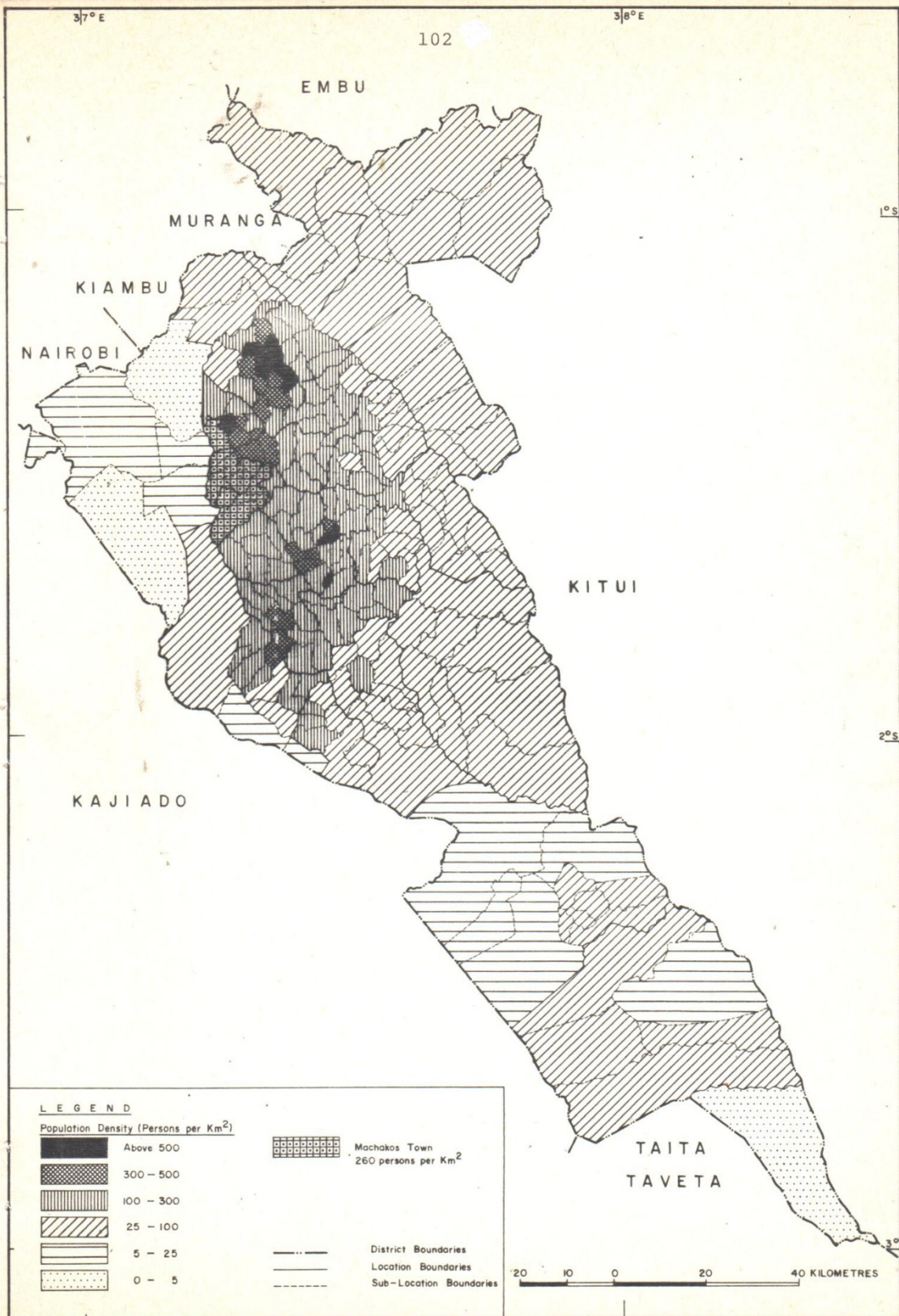
- Sources :
1. MIDP.
 2. Technoserve.
 3. Catholic Development Office.
 4. Australian High Commission.
 5. CARE



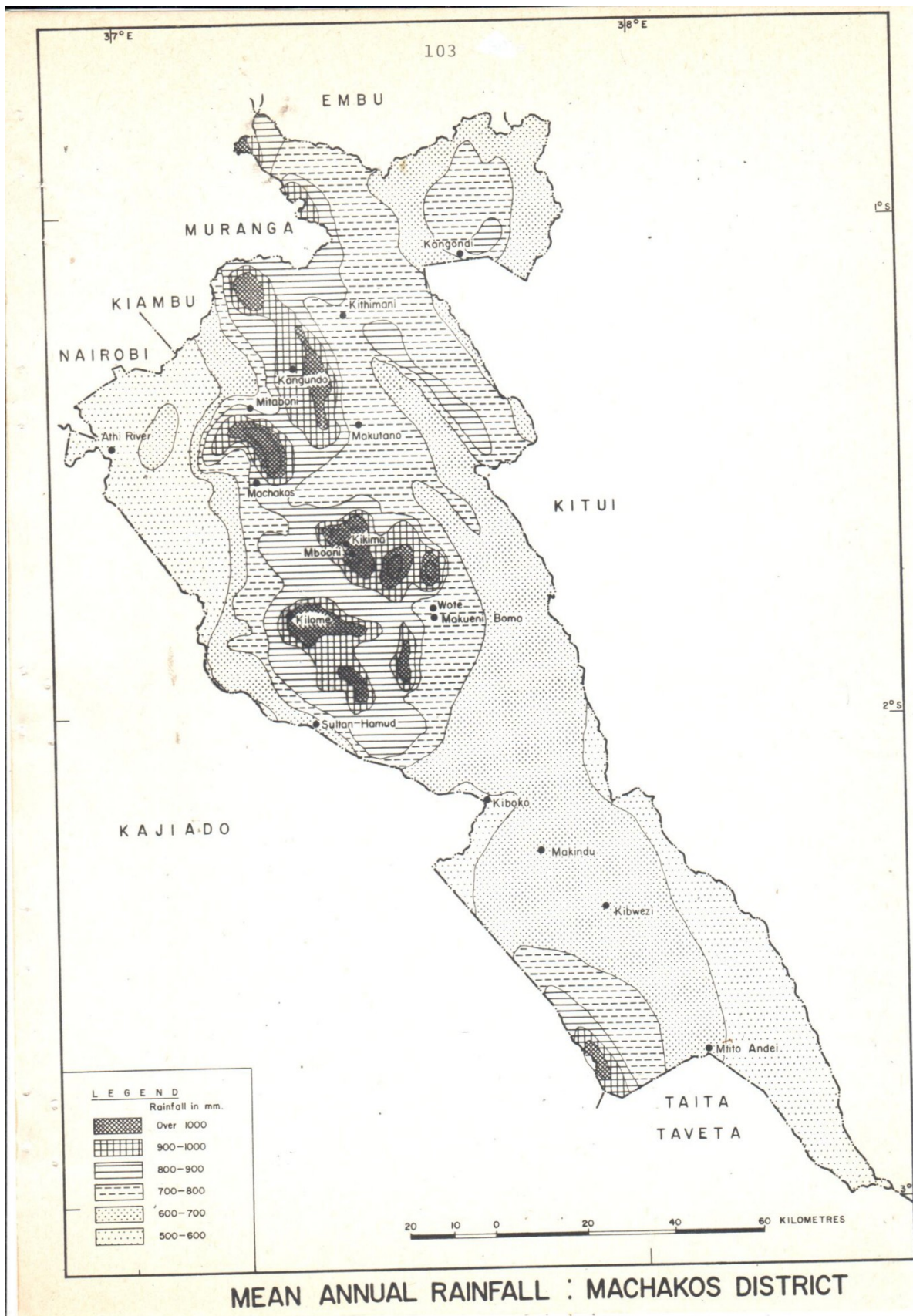
ADMINISTRATIVE BOUNDARIES : MACHAKOS DISTRICT

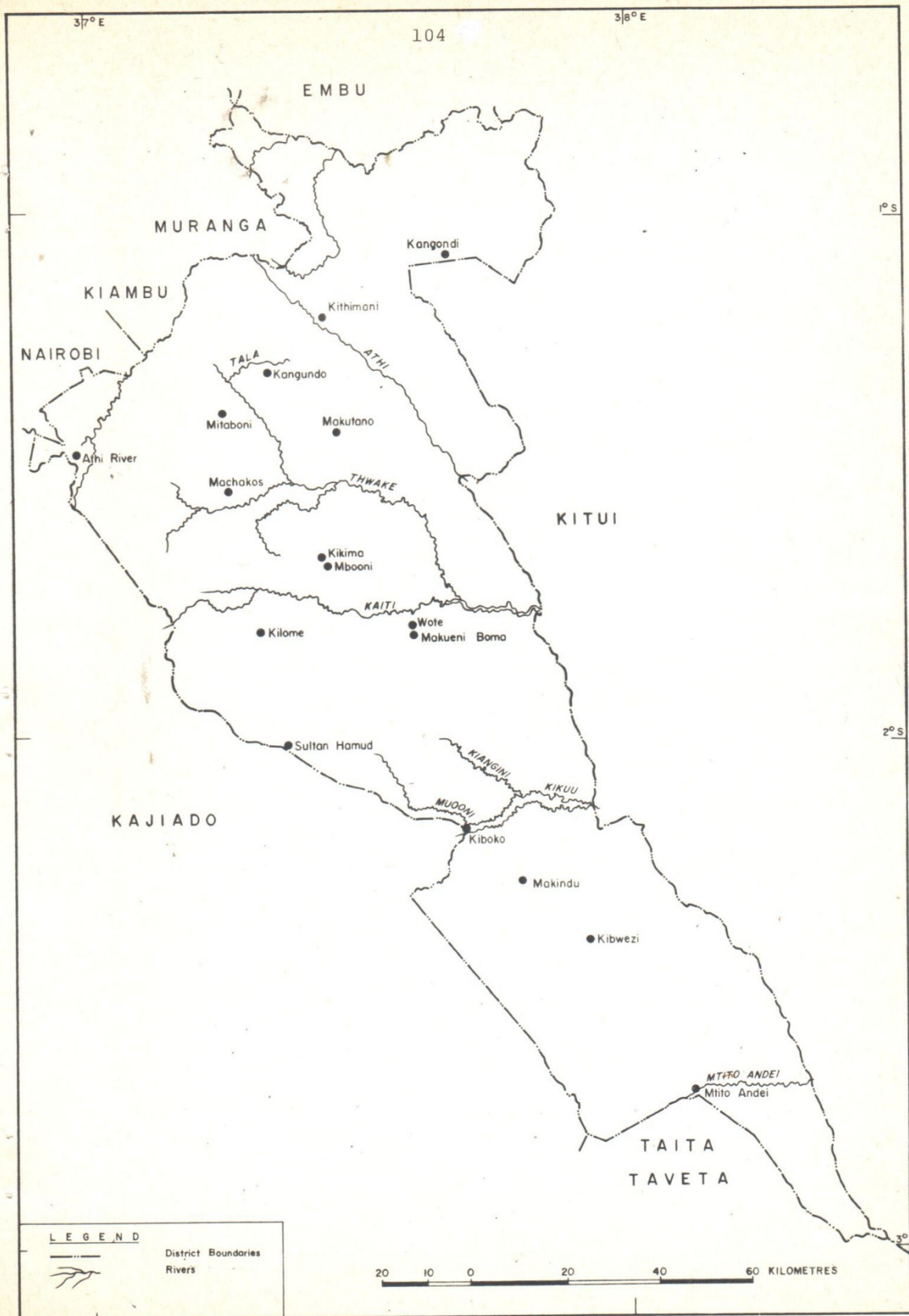


RELIEF : MACHAKOS DISTRICT

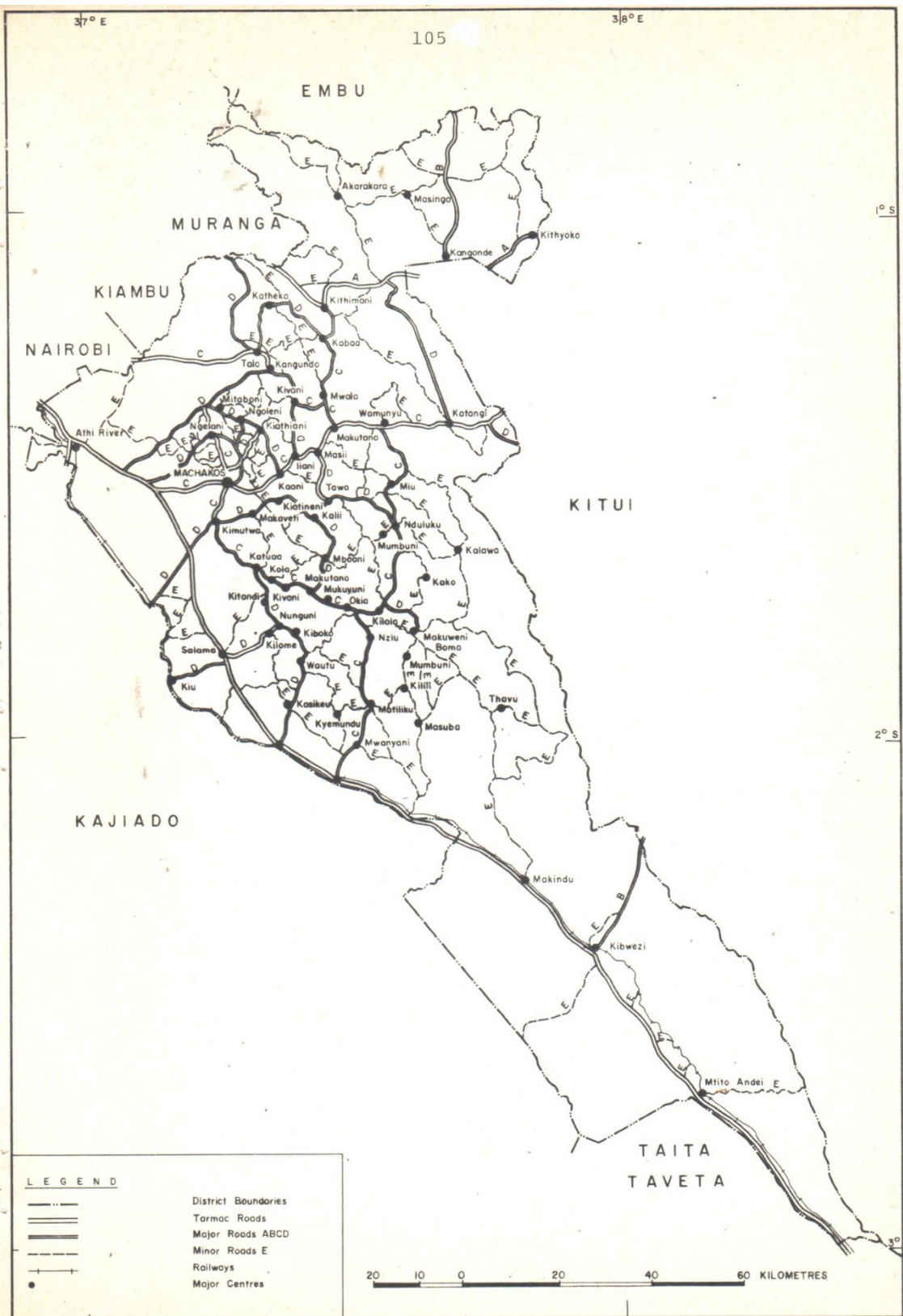


POPULATION DENSITY (1979 CENSUS) : MACHAKOS DISTRICT



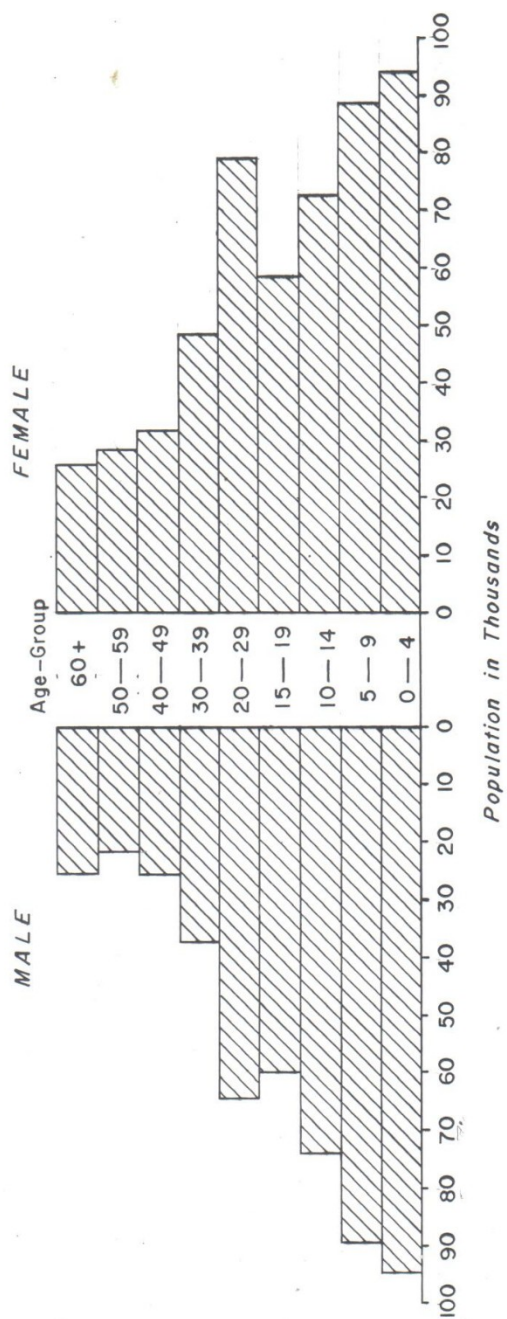


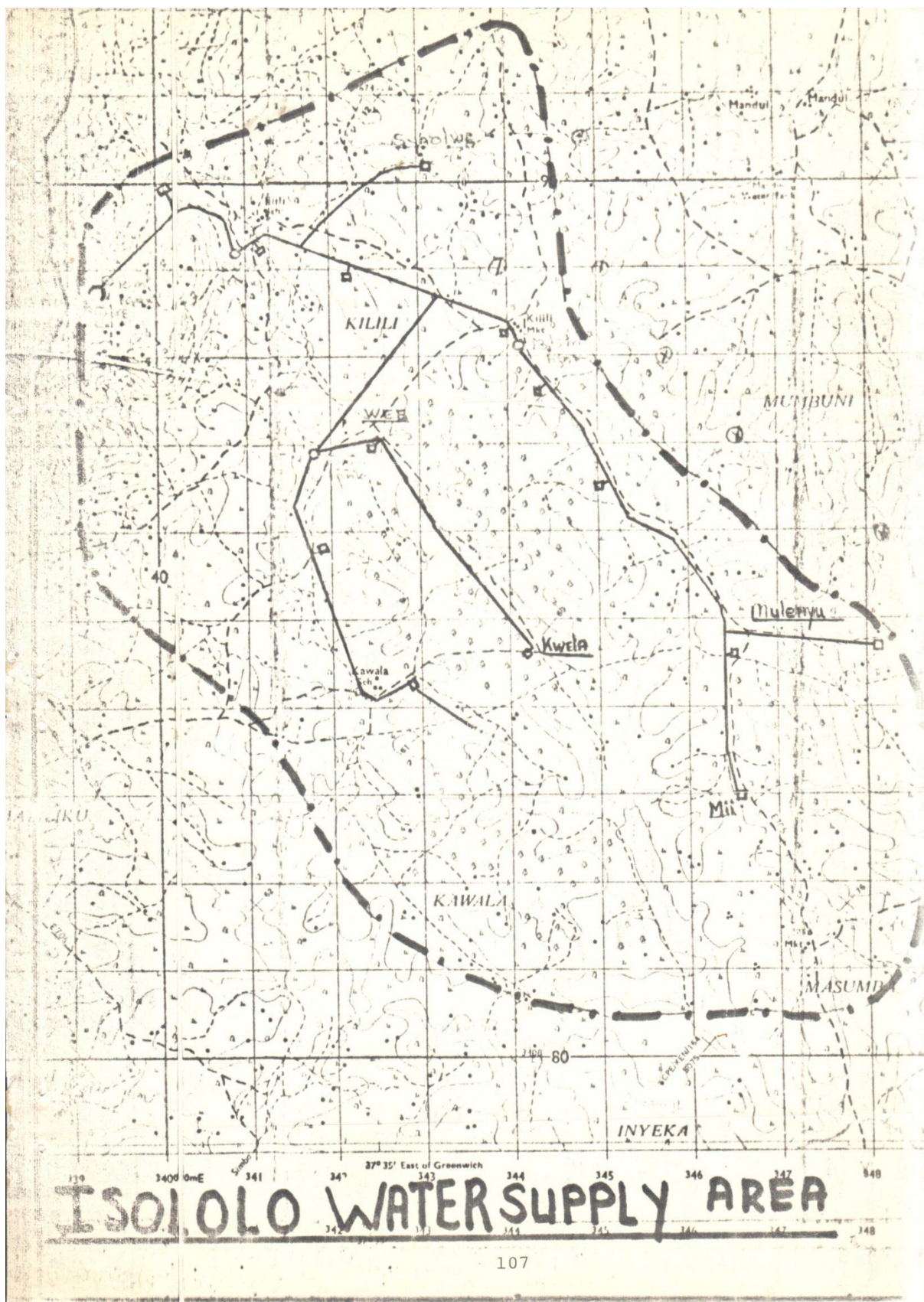
DRAINAGE SYSTEM : MACHAKOS DISTRICT



COMMUNICATION SYSTEM : MACHAKOS DISTRICT

POPULATION PYRAMID - MACHAKOS DISTRICT





This topographic map depicts the Kilili area in Kenya, featuring a proposed road route. The map includes contour lines indicating elevation, with labels such as 3500, 3600, 3700, 3800, 3900, 4000, and 4200. Key locations and features include:

- Proposed Road Route:** A line connecting Matungu, Muliya School, Kilili, Kawala, and Masumba.
- Locations and Features:**
 - Kilili:** The central hub, featuring a main tank, a 100 m.s. distance marker, and a 3600 contour line.
 - Kawala:** Located to the west of Kilili, featuring a school (Kawala Sch.) and a 3500 contour line.
 - Matungu:** Located to the southwest of Kilili, featuring a 3700 contour line and a 100 m.s. distance marker.
 - Muliya School:** Located to the south of Kilili.
 - Masumba:** Located to the southwest of Matungu.
 - Mumbuni:** Located to the southeast of Kilili.
 - Matiliku:** Located to the north of Kilili.
 - Muliya Water Tank:** Located to the east of Kilili.
 - Kilili Mkt.:** Located to the east of Kilili.
 - Wee School:** Located to the north of Kilili.
 - Kilili Sch.:** Located to the north of Kilili.
 - Muliya Sch.:** Located to the north of Kilili.
 - Muliya Water Tank:** Located to the east of Kilili.
 - Muliya Water Tank:** Located to the east of Kilili.
- Contour Lines:** Indicate elevation, with labels such as 3500, 3600, 3700, 3800, 3900, 4000, and 4200.
- Coordinates:** The map is bounded by coordinates 37° 35' E and 1° 55' S.